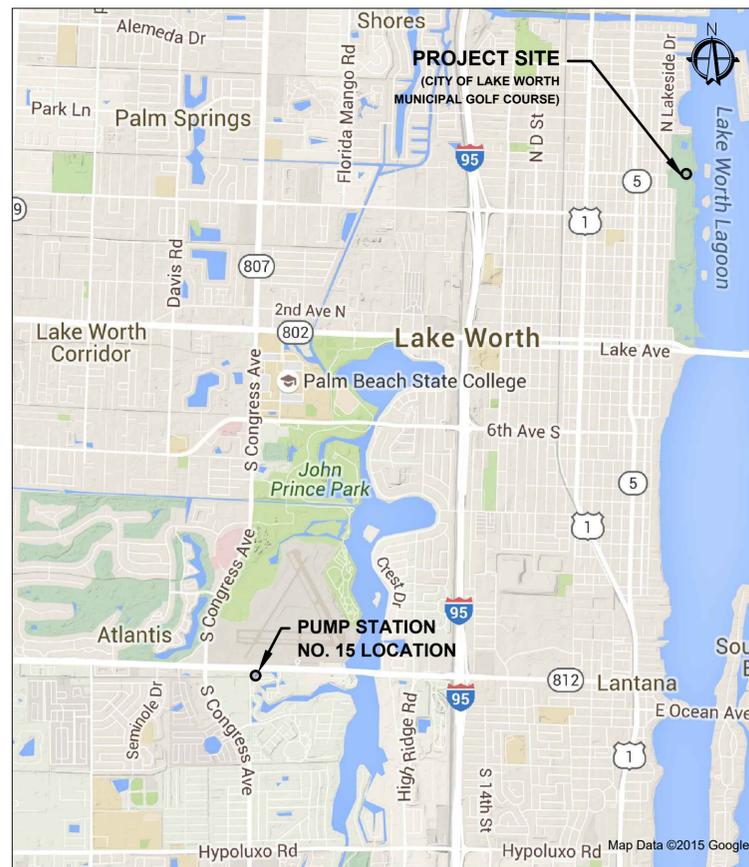


WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT

PREPARED FOR
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA
JANUARY 2016
SOLICITATION NO. IFB-16-108
PROJECT NO. LS1503



VICINITY MAP

N.T.S.

SECTION 15, TOWNSHIP 44 SOUTH, RANGE 43 EAST



CITY COMMISSION

PAM TRIOLO, MAYOR
SCOTT MAXWELL, VICE MAYOR
CHRISTOPHER MCVOY
ANDY AMOROSO
RYAN MAIER

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
C0-1	COVER
C0-2	LOCATION MAP, NOTES AND LEGENDS
C0-3	DEMOLITION PLAN
C1-1	SITE PLAN
C1-2	ENLARGED FINAL SITE PLAN
C5-1	PUMP STATION DETAILS
C5-2	PUMP STATION DETAILS-ALTERNATE BID
C5-3	DETAILS
C5-4	DETAILS
E1-1	ELECTRICAL PLAN
E2-1	ELECTRICAL DETAILS
E3-1	CONTROL PANEL DETAILS
E4-1	4 SYSTEM WIRING DIAGRAM
E5-1	CONTROL SYSTEM WIRING DIAGRAM
E6-1	RTU PANEL DETAILS
E7-1	RTU WIRING DIAGRAM
E8-1	ISB PANEL WIRING DIAGRAM
LP-1	LANDSCAPE PLAN
TOTAL NO. OF SHEETS - 18	

PLOT DATE: Feb 04, 2016 - 6:53pm XREFS: K:\w\w\map\dwg\lwtbase.dwg IMAGES: I:\w\w\p4\pump station 4.PNG

BAR IS EQUAL TO ONE INCH
ON ORIGINAL DRAWING
ADJUST ALL SCALED
DIMENSIONS ACCORDINGLY

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PS4RCS01 CO-1.dwg

NO.	DATE	BY	REVISION

SEAL	FLORIDA E.B. NO. 48
SHAMPALE M. HOLLAND FLORIDA P.E. NO. 69081	
DATE	

FLORIDA L.B. NO. 48

MOCK • ROOS
ENGINEERS • SURVEYORS • PLANNERS

5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

FIELD: ----
DRAWN: YM
DESIGN: SMH
APPR: GGG
SCALE: AS SHOWN

WASTEWATER PUMP STATION NO. 4
AND GENERATOR REPLACEMENT
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA

DATE:	JANUARY 2016
P.A. NO.	B5018.00
DWG. NO.	44-43-15-157
SHEET:	CO-1



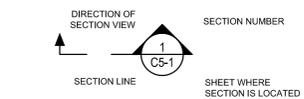
LEGEND

BFP	BACKFLOW PREVENTER
CONC	CONCRETE
DIP	DUCTILE IRON PIPE
E	EASTING
EP	EDGE OF PAVEMENT
EL	ELEVATION
F.F.	FINISH FLOOR ELEVATION
FM	FORCEMAIN
INV	INVERT
MIN	MINIMUM
N	NORTHING
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NTS	NOT TO SCALE
OHW	OVERHEAD WIRE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RTU	REMOTE TELEMETRY UNIT
SS	SANITARY SEWER

SYMBOL LEGEND

	EXISTING BACKFLOW PREVENTER
	OVERHEAD UTILITY WIRE
	EXISTING ELEVATION
	WOOD POWER POLE
	SANITARY MANHOLE
	SPRINKLER HEAD
	STORM MANHOLE
	CLEAN OUT
	GUY WIRE ANCHOR
	SITE BENCHMARK
	EXISTING FORCEMAIN
	EXISTING SANITARY SEWER

CIVIL SECTION VIEW, CALL OUT SYMBOLS



CIVIL DETAIL, CALL OUT SYMBOLS



TREE LEGEND:

	HEDGE
	PALM SPECIES
	UNKNOWN
	OAK

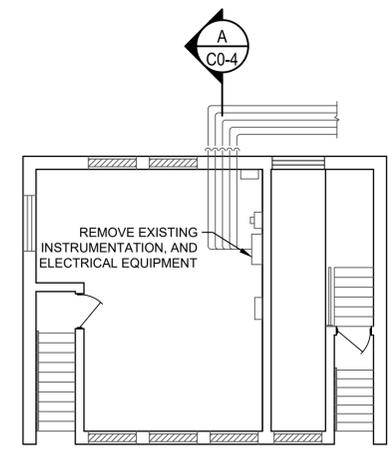
↑ INDICATES TRUNK DIAMETER
 NOTE: VERIFICATION OF TREE SPECIES SHOULD BE CONDUCTED BY A PROFESSIONAL ENGAGED IN THE FIELD OF NATURAL SCIENCE.

GENERAL NOTES

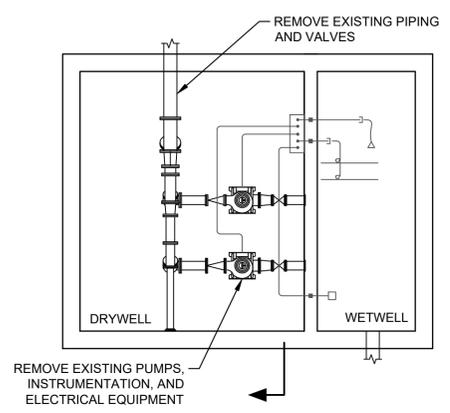
1. THE SURVEY DEPICTED HEREON HAS BEEN CLASSIFIED AS A TOPOGRAPHIC SURVEY, AS DEFINED IN RULE 5J-17.050(10)(K) OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AS AMENDED. THIS SURVEY HAS BEEN PREPARED IN THE OFFICE OF DENNIS J. LEAVY & ASSOCIATES, INC. LOCATED AT: 460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FLORIDA WHOSE CERTIFICATE OF AUTHORIZATION NUMBER IS 6599, AND THE CERTIFYING SURVEYORS LICENSE NUMBER IS LS 5888.
2. DATE OF FIELD SURVEY: JUNE 25, 2015, AS RECORDED IN FIELD BOOK: 409, PAGES 59, 63 AND 64.
3. UNDERGROUND APPARENT USE AND/OR IMPROVEMENTS NOT LOCATED UNLESS OTHERWISE NOTED.
4. MEASUREMENTS SHOWN HEREON ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED.
5. IN SOME INSTANCES, GRAPHIC REPRESENTATIONS HAVE BEEN EXAGGERATED TO MORE CLEARLY ILLUSTRATE RELATIONSHIPS BETWEEN PHYSICAL IMPROVEMENTS AND/OR LOT LINES. IN ALL CASES, DIMENSIONS SHOWN SHALL CONTROL THE LOCATION OF THE IMPROVEMENTS OVER SCALED POSITIONS.
6. BENCHMARKS OF ORIGIN: PALM BEACH COUNTY ENGINEERING DEPARTMENT BENCHMARKS "N 233" AND "K 402" WHOSE PUBLISHED ELEVATIONS ARE 16.532' AND 17.211' RESPECTIVELY, BASED UPON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
7. ELEVATIONS REFERENCED HEREON ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
8. THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
9. CONTRACTOR SHALL VERIFY SURVEY DATA ON THE DRAWINGS PRIOR TO CONSTRUCTION.
10. LIMITS OF CONSTRUCTION SHALL BE WITHIN THE UTILITY EASEMENT, RIGHT OF WAY, AND CITY PROPERTY.
11. PUMP STATION NO. 4 IS LOCATED WITHIN THE CITY OF LAKE MUNICIPAL GOLF COURSE. CONSTRUCTION ACTIVITY SHALL BE BETWEEN THE HOURS OF 8:00 AM AND 6:00 PM.
12. THE CONTRACTOR SHALL ACCESS THE SITE FROM THE UTILITY ENTRANCE GATE ON 14TH AVENUE NORTH. THE CONTRACTOR SHALL USE THE GOLF CART PATH FOR ACCESS TO THE SITE AS INDICATED ON THE DRAWINGS. OTHER ROUTES WITHIN THE GOLF COURSE SHALL NOT BE USED BY THE CONTRACTOR. THE CONTRACTOR SHALL STABILIZE THE ROUTE AS NECESSARY FOR ACCESS TO THE SITE.
13. THE CONTRACTOR SHALL NOT PARK CONSTRUCTION EQUIPMENT OR VEHICLES ON THE GOLF CART PATH.
14. THE CONTRACTOR SHALL NOT STOCKPILE MATERIALS ON THE GOLF CART PATH.
15. THE CONTRACTOR SHALL PLAN CONSTRUCTION ACTIVITIES TO MAINTAIN AN OPEN GOLF CART PATH THROUGHOUT CONSTRUCTION.
16. THE CONTRACTOR SHALL PROVIDE A TEMPORARY CONSTRUCTION FENCE TO SECURE THE CONSTRUCTION AREA.
17. THE CONTRACTOR SHALL RECONSTRUCT THE GOLF CART PATH ALONG THE ACCESS ROUTE AT THE END OF THE PROJECT.
18. THE CONTRACTOR SHALL REPAIR EXISTING IRRIGATION DAMAGED DURING CONSTRUCTION WITHIN 48 HOURS.
19. ALL LOCATIONS AND ELEVATIONS SHOWN FOR EXISTING GRADES FOR SURFACE AND SUBSURFACE STRUCTURES, PIPING, ETC. ARE BASED ON RECORD DRAWINGS AND THE BEST AVAILABLE INFORMATION. WHILE EVERY ATTEMPT HAS BEEN MADE TO PROVIDE ACCURATE DATA, THE CONTRACTOR SHALL CONSIDER ALL LOCATIONS AND ELEVATIONS APPROXIMATE IN NATURE. PRIOR TO THE START OF CONSTRUCTION AND/OR ORDERING OF ANY MATERIALS OR FABRICATED ITEMS, THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATIONS AND ELEVATIONS. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF "OTHER" STRUCTURES, UTILITIES, ETC. NOT SHOWN ON THE DRAWINGS EXIST WITHIN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION AND WRITTEN NOTIFICATION OF ALL CONFLICTS WITH THE PROPOSED CONSTRUCTION TO THE ENGINEER. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL ALL CONFLICTS HAVE BEEN RESOLVED.
20. CONTRACTOR MUST MAINTAIN WASTEWATER FLOW FROM THE SITE AT ALL TIMES UNTIL NEW PUMPS AND ELECTRICAL CONTROLS HAVE BEEN INSTALLED, TESTED, AND APPROVED.
21. A PRIMARY AND BACKUP SOURCE OF BY-PASS PUMPING SHALL BE PROVIDED WITH APPROPRIATE BACKUP ELECTRICAL, MECHANICAL AND OTHER APPURTENANCES AS NEEDED FOR WARNING OF PUMP FAILURE AND/OR ELECTRICAL FAILURE.
22. SITE MUST BE KEPT SECURE BY CONTRACTOR AT ALL TIMES.
23. FINAL LOCATION OF NEW FENCING SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER AND OWNER WITH THE CONTRACTOR.
24. CITY TO PROVIDE NEW WATER METER AND METER BOX FOR NEW WATER SERVICE INSTALLATION.
25. CITY TO PROVIDE CLEANOUTS FOR NEW SEWER SERVICE.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVAL, DISPOSAL, ABANDONMENT, AND RELOCATIONS NECESSARY TO COMPLETE THE WORK.
27. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY ACTIVITIES INVOLVING CONSTRUCTION, STAGING AREAS, AND ACCESS ROADS IN KIND. ALL DISTURBED NON-PAVED AREAS SHALL BE SODDED IN KIND.
28. ALL STRUCTURE AND INLET COORDINATES ARE FOR THE CENTER OF THE STRUCTURE, UNLESS OTHERWISE NOTED.
29. CONTRACTOR SHALL ADJUST ALL INLET AND MANHOLE COVERS AND VALVE BOXES WITHIN THE LIMITS OF CONSTRUCTION, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE INSTALLING FINAL LIFT OF ASPHALT.
30. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ANY NPDES REQUIREMENTS THROUGH FINAL COMPLETION.
31. THE CONTRACTOR SHALL COORDINATE WITH THE NECESSARY UTILITY COMPANIES AND SUNSHINE STATE ONE CALL (811 OR 800-852-8057) FOR LOCATES 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

LOCATION MAP, NOTES AND LEGENDS

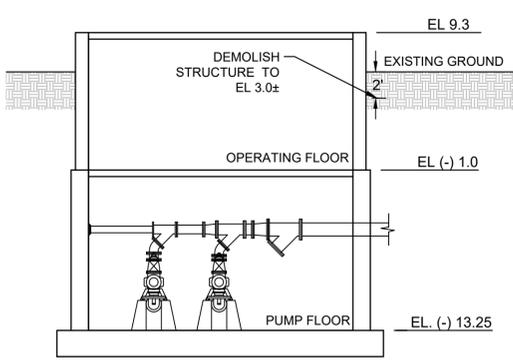
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OPERATING FLOOR



PUMP ROOM FLOOR

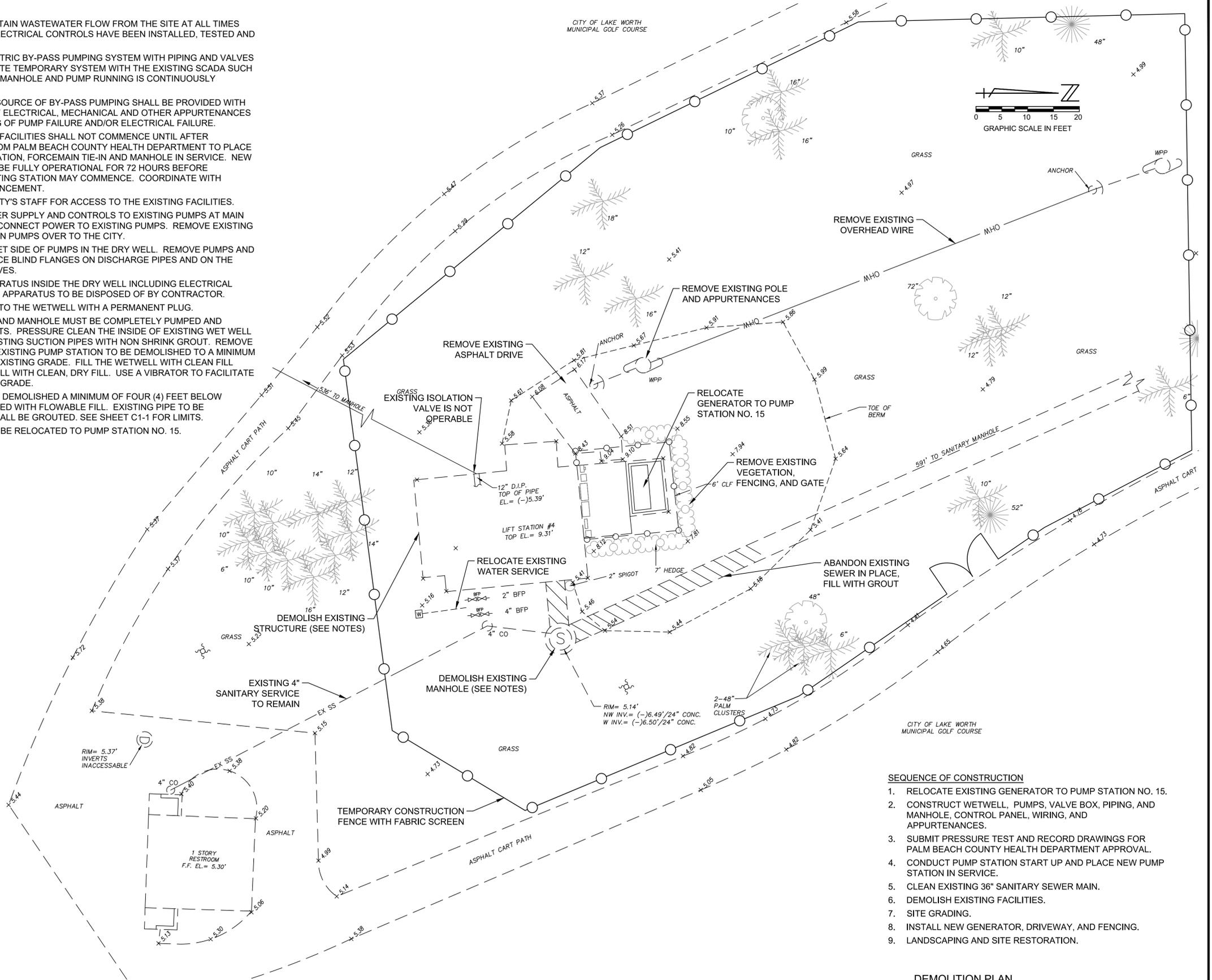


SECTION A



DEMOLITION NOTES

1. CONTRACTOR MUST MAINTAIN WASTEWATER FLOW FROM THE SITE AT ALL TIMES UNTIL NEW PUMPS AND ELECTRICAL CONTROLS HAVE BEEN INSTALLED, TESTED AND APPROVED BY THE CITY.
2. SET UP TEMPORARY ELECTRIC BY-PASS PUMPING SYSTEM WITH PIPING AND VALVES AS NECESSARY. INTEGRATE TEMPORARY SYSTEM WITH THE EXISTING SCADA SUCH THAT HIGH WATER IN THE MANHOLE AND PUMP RUNNING IS CONTINUOUSLY MONITORED.
3. A PRIMARY AND BACKUP SOURCE OF BY-PASS PUMPING SHALL BE PROVIDED WITH APPROPRIATE BACKUP OF ELECTRICAL, MECHANICAL AND OTHER APPURTENANCES AS NEEDED FOR WARNING OF PUMP FAILURE AND/OR ELECTRICAL FAILURE.
4. DEMOLITION OF EXISTING FACILITIES SHALL NOT COMMENCE UNTIL AFTER RECEIVING APPROVAL FROM PALM BEACH COUNTY HEALTH DEPARTMENT TO PLACE THE PROPOSED PUMP STATION, FORCEMAIN TIE-IN AND MANHOLE IN SERVICE. NEW PUMPING STATION SHALL BE FULLY OPERATIONAL FOR 72 HOURS BEFORE DEMOLITION OF THE EXISTING STATION MAY COMMENCE. COORDINATE WITH OWNER PRIOR TO COMMENCEMENT.
5. COORDINATE WITH THE CITY'S STAFF FOR ACCESS TO THE EXISTING FACILITIES.
6. LOCKOUT ELECTRIC POWER SUPPLY AND CONTROLS TO EXISTING PUMPS AT MAIN ELECTRIC PANEL AND DISCONNECT POWER TO EXISTING PUMPS. REMOVE EXISTING WIRE AND CONDUITS. TURN PUMPS OVER TO THE CITY.
7. CLOSE VALVE ON THE INLET SIDE OF PUMPS IN THE DRY WELL. REMOVE PUMPS AND DISCHARGE VALVES. PLACE BLIND FLANGES ON DISCHARGE PIPES AND ON THE PUMP SUCTION GATE VALVES.
8. REMOVE ALL OTHER APPARATUS INSIDE THE DRY WELL INCLUDING ELECTRICAL SWITCHGEAR. ALL OTHER APPARATUS TO BE DISPOSED OF BY CONTRACTOR.
9. PLUG THE INFLUENT PIPE TO THE WETWELL WITH A PERMANENT PLUG.
10. THE EXISTING WET WELL AND MANHOLE MUST BE COMPLETELY PUMPED AND CLEANED OF ALL CONTENTS. PRESSURE CLEAN THE INSIDE OF EXISTING WET WELL AND MANHOLE. PLUG EXISTING SUCTION PIPES WITH NON SHRINK GROUT. REMOVE ALL PIPING AND VALVES. EXISTING PUMP STATION TO BE DEMOLISHED TO A MINIMUM OF TWO (2) FEET BELOW EXISTING GRADE. FILL THE WETWELL WITH CLEAN FILL GRAVEL. FILL THE DRYWELL WITH CLEAN, DRY FILL. USE A VIBRATOR TO FACILITATE COMPLETE FILLING UP TO GRADE.
11. EXISTING MANHOLE TO BE DEMOLISHED A MINIMUM OF FOUR (4) FEET BELOW EXISTING GRADE AND FILLED WITH FLOWABLE FILL. EXISTING PIPE TO BE ABANDONED IN PLACE. SHALL BE GROUTED. SEE SHEET C1-1 FOR LIMITS.
12. EXISTING GENERATOR TO BE RELOCATED TO PUMP STATION NO. 15.



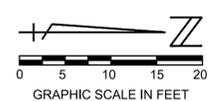
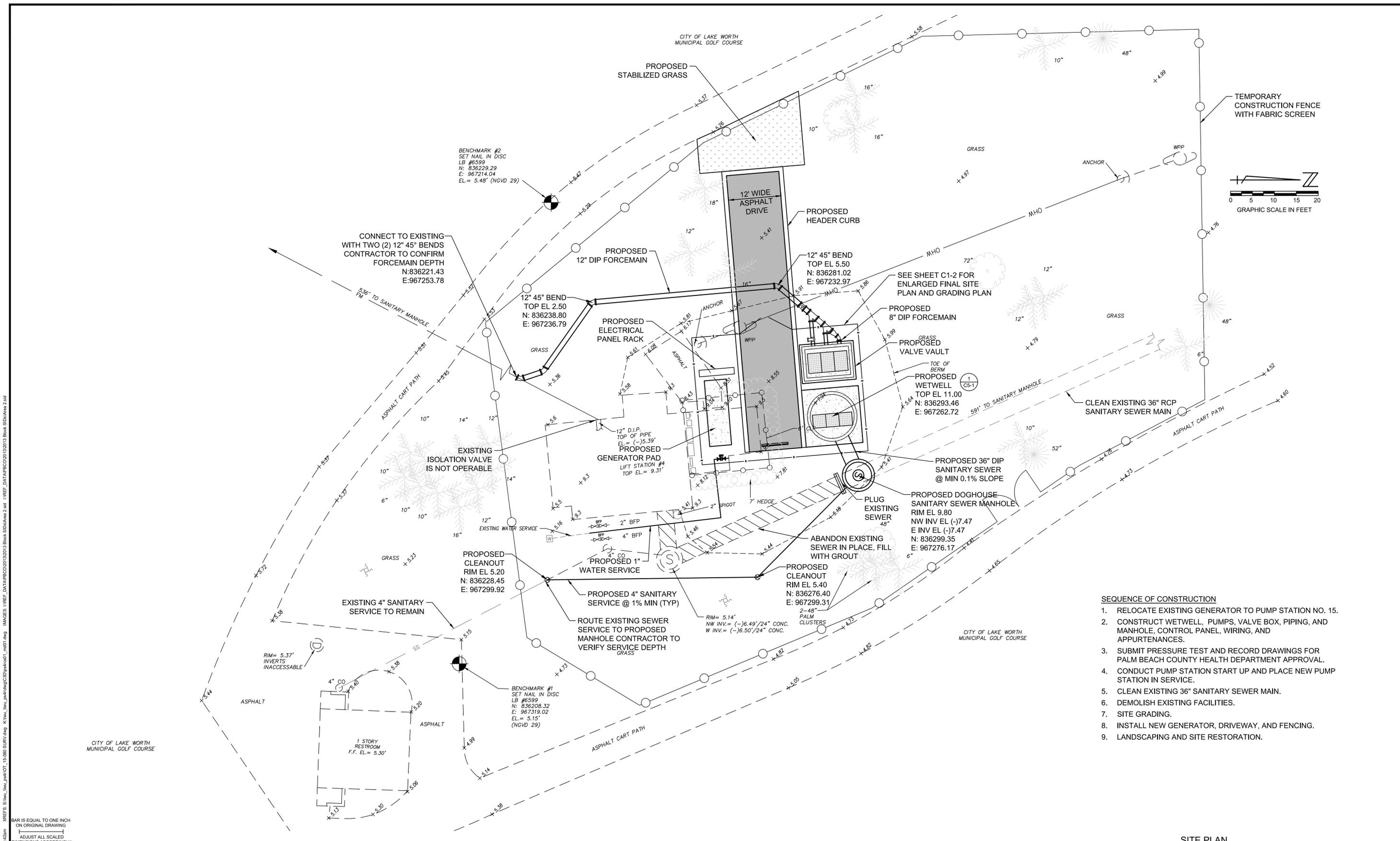
SEQUENCE OF CONSTRUCTION

1. RELOCATE EXISTING GENERATOR TO PUMP STATION NO. 15.
2. CONSTRUCT WETWELL, PUMPS, VALVE BOX, PIPING, AND MANHOLE, CONTROL PANEL, WIRING, AND APPURTENANCES.
3. SUBMIT PRESSURE TEST AND RECORD DRAWINGS FOR PALM BEACH COUNTY HEALTH DEPARTMENT APPROVAL.
4. CONDUCT PUMP STATION START UP AND PLACE NEW PUMP STATION IN SERVICE.
5. CLEAN EXISTING 36" SANITARY SEWER MAIN.
6. DEMOLISH EXISTING FACILITIES.
7. SITE GRADING.
8. INSTALL NEW GENERATOR, DRIVEWAY, AND FENCING.
9. LANDSCAPING AND SITE RESTORATION.

DEMOLITION PLAN

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 BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
 ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

NO.		DATE		BY		REVISION		SEAL	FLORIDA E.B. NO. 48	FLORIDA L.B. NO. 48	FIELD: D. LEAVY	DATE: JANUARY 2016	
								SHAMPALE M. HOLLAND FLORIDA P.E. NO. 69081	MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS	7220 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248	DRAWN: YM DESIGN: SMH APPR: GGG SCALE: AS SHOWN	WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	P.A. NO. B5018.00 DWG. NO. 44-43-15-157 SHEET: C0-3

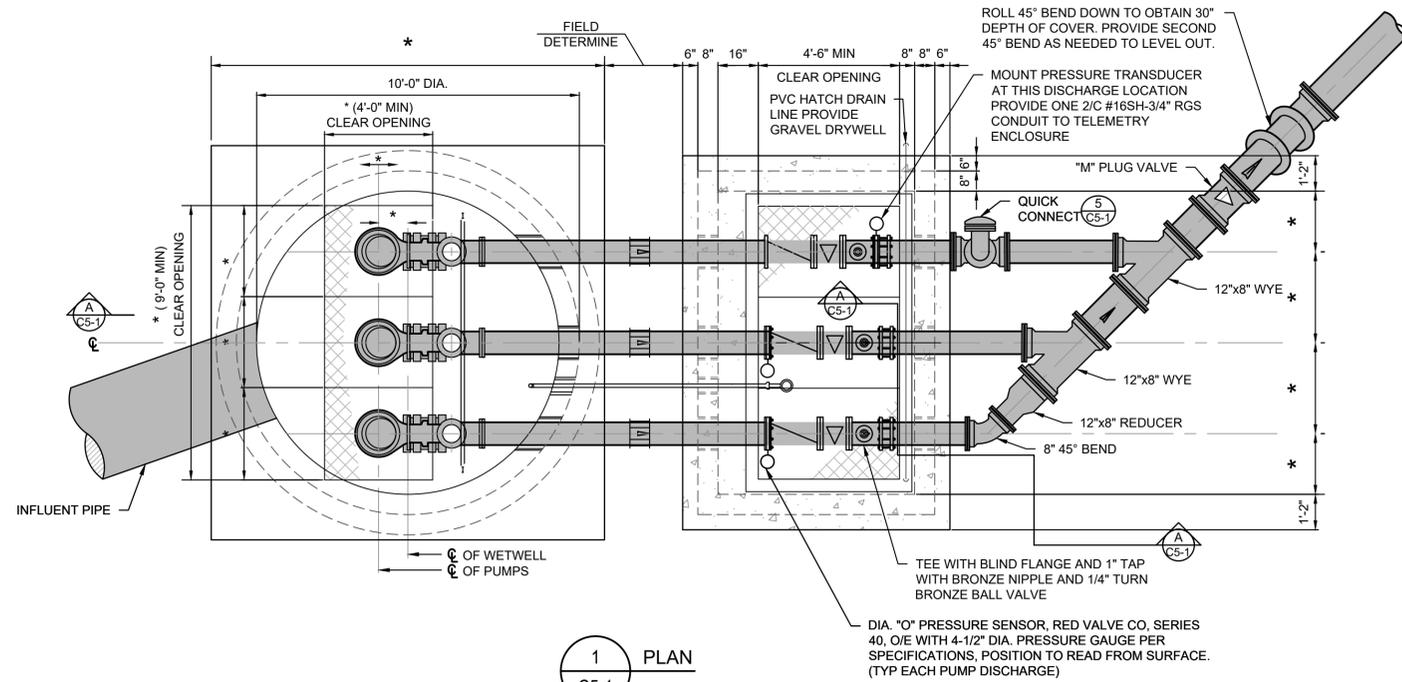


- SEQUENCE OF CONSTRUCTION**
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 2. CONSTRUCT WETWELL, PUMPS, VALVE BOX, PIPING, AND MANHOLE, CONTROL PANEL, WIRING, AND APPURTENANCES.
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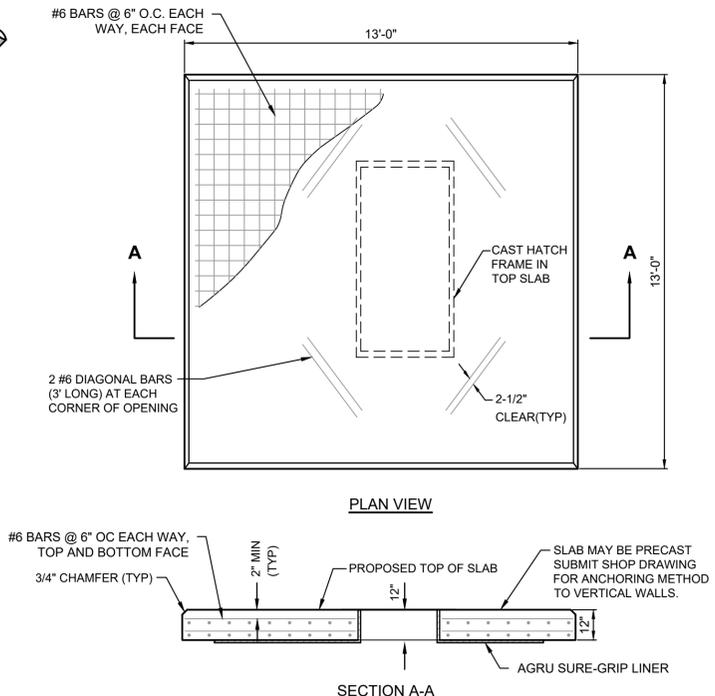
SITE PLAN

CADD FILE: K:\Wu_Wwu_psf41dwg PS4RCS01_C1-1.dwg	NO. DATE BY REVISION	SEAL	FLORIDA E.B. NO. 48	MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248	FLORIDA L.B. NO. 48	FIELD: D. LEAVY	DATE: JANUARY 2016
		SHAMPALE M. HOLLAND FLORIDA P.E. NO. 69081	DATE		DRAWN: YM DESIGN: SMH APPR: GGG SCALE: AS SHOWN	WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	P.A. NO. B5018.00 DWG. NO. 44-43-15-157 SHEET: C1-1

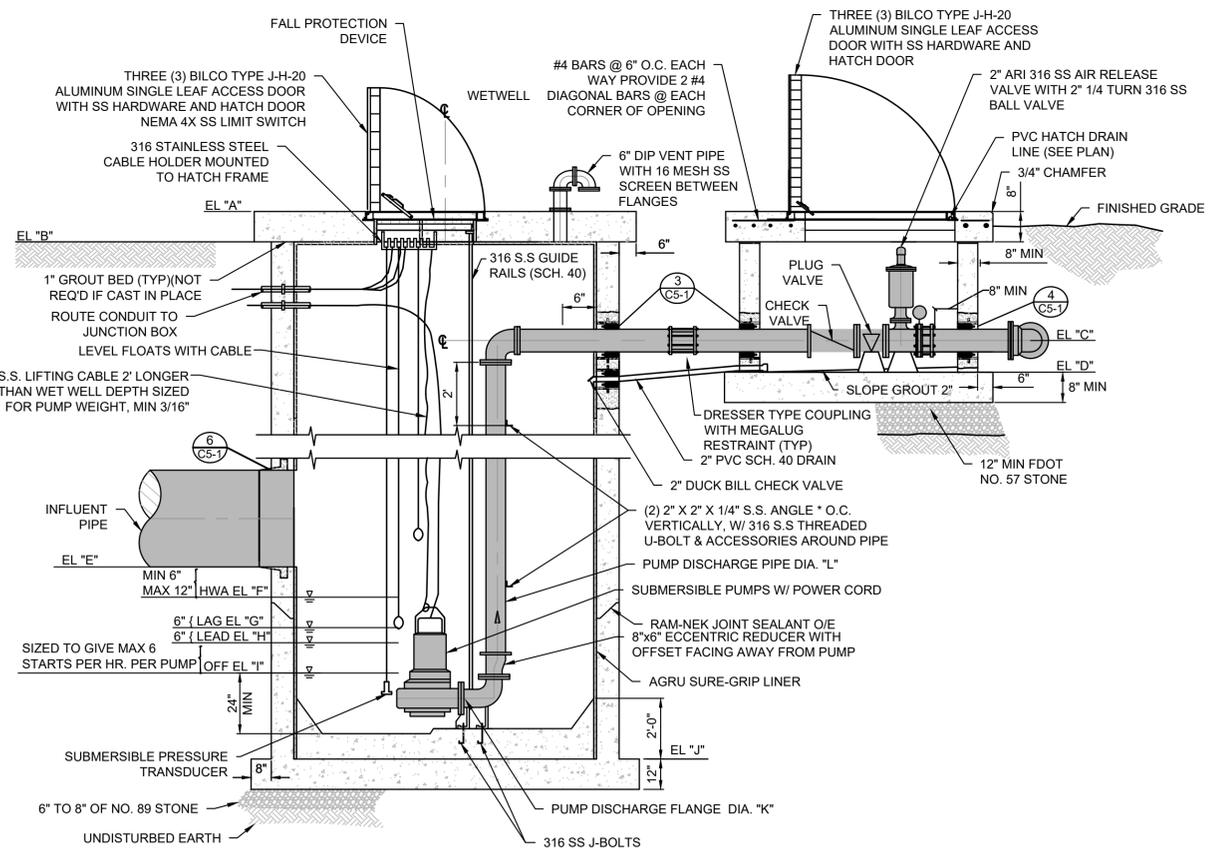
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 BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
 ADJUST ALL SCALED DIMENSIONS ACCORDINGLY



1 PLAN
C5-1

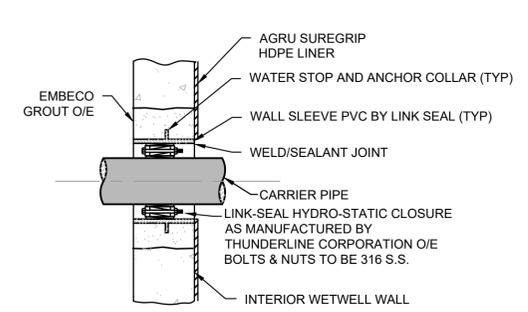


2 TOP SLAB DETAIL
C5-1

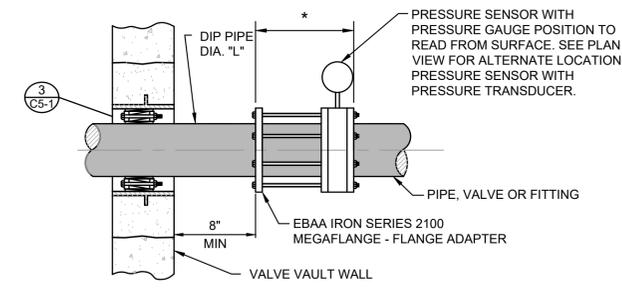


A SECTION
C5-1

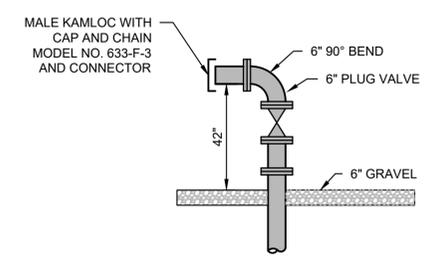
PUMP STATION DATA			
PUMP CAPACITY	GPM		1000
PUMP HEAD (FT)	FT		29
PUMP HORSEPOWER	HP		25
TOP OF SLAB	EL "A"		11.00
FINISH GRADE	EL "B"		10.50
DISCHARGE PIPE	EL "C"		7.45
VALVE BOX BASE SLAB	EL "D"		5.90
LOWEST INFLUENT LINE - INV	EL "E"		(-7.50)
HIGH LEVEL ALARM (HWA)	EL "F"		(-8.00)
LAG PUMP ON	EL "G"		(-9.00)
LAG PUMP OFF	EL "H"		(-9.50)
BOTH PUMPS OFF	EL "I"		(-12.50)
WETWLL BASE SLAB	EL "J"		(-15.00)
PUMP DISCHARGE FLANGE	DIA "K"		6"
PUMP DISCHARGE PIPE	DIA "L"		8"
COMMON FORCEMAIN	DIA "M"		12"



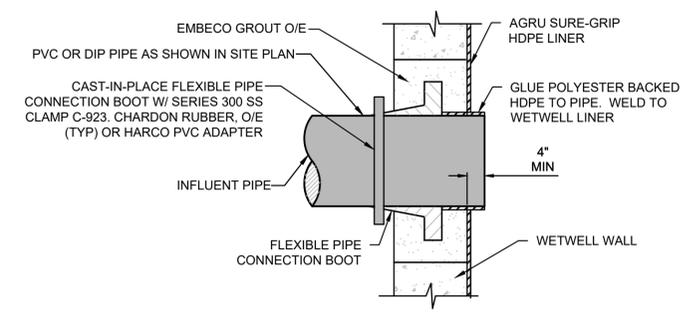
3 TYPICAL WALL PENETRATION
C5-1



4 DETAIL
C5-1



5 PUMP STATION QUICK CONNECT
C5-1



6 INFLUENT PIPE WALL PENETRATION
C5-1

GENERAL NOTES

1. SYMBOL (⌀) DENOTES DIMENSION TO BE CONFIRMED WITH MANUFACTURERS SHOP DRAWINGS.
2. ALL EQUIPMENT, ANCHOR BOLT SIZES, LOCATIONS, CLEARANCES, ETC. SHALL BE IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE APPROVED SHOP DRAWINGS.
3. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL HAVE A BITUMASTIC COATING (2 COATS, 9 MILS EACH COAT DFT).
4. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" MINIMUM.
5. ALL BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
6. TYPE 316 STAINLESS STEEL SHALL BE USED IN THE WET WELL FOR FLANGE BOLTS, BRACKETS, GUIDE RAILS AND ALL OTHER HARDWARE.
7. PUMP ACCESS HATCH CONFIGURATION & DIMENSIONS SHALL BE CONFIRMED WITH EQUIPMENT SUPPLIER. DIMENSIONS SHOWN ARE MINIMUM VALUES ONLY.
8. PIPING, VALVES AND FITTINGS IN VALVE VAULT AREA SHALL BE SUPPORTED AT A MINIMUM AS RECOMMENDED BY THE MANUFACTURER. THE ENGINEER OR HIS REPRESENTATIVE MAY DETERMINE IN THE FIELD THAT ADDITIONAL SUPPORTS ARE NECESSARY.
9. PRESSURE GAUGES SHALL BE TRERICE MODEL D-80 SERIES, BY MARSHALLTOWN. GAUGES SHALL BE DUAL SCALE AND SHALL BE CALIBRATED 0-150 PSI AND 350 FEET OF WATER. GAUGES SHALL HAVE 4-INCH DIAMETER DIALS. GAUGE CASES SHALL BE 304 STAINLESS STEEL, FLANGED MOUNTED, BACK OR BOTTOM CONNECTED WITH "SNAP-ON" RING OR BEZEL. BOURDON TUBES SHALL BE OF 316 STAINLESS STEEL. THE POINTERS SHALL BE ADJUSTABLE FOR FIELD CALIBRATION AND SETTING. EACH GAUGE SHALL BE EQUIPPED WITH A LEVER HANDLE GAUGE COCK OF 316 STAINLESS STEEL CONSTRUCTION. CONNECTION OF THE GAUGES SHALL BE WITH SCREWED 316 STAINLESS STEEL PIPE NEATLY INSTALLED WITH STRAIGHT RUNS AND RIGHT ANGLE BENDS.
10. PROVIDE A MINIMUM 3-1/2" CLEARANCE IN FRONT OF PANEL DISCONNECT AND METER.
11. WET WELL SHALL BE CONSTRUCTED OF 10'-0" MAX. LG. SECTIONS OF REINFORCED CONCRETE PIPE, IN ACCORDANCE WITH FDOT SPECIFICATIONS. WHENEVER POSSIBLE, NO OPENING SHALL BE WITHIN 12" OF THE END OF ANY SECTION.
12. ALL WETWELL SECTIONS INCLUDING TOP SLABS SHALL BE LINED WITH AGRU SUREGRIP HDPE LINER.
13. ACCORDING TO FEMA PRELIMINARY PANEL 12099C0953 F, THE PUMP STATION IS WITHIN ZONE AE WITH A 100 YEAR BASE FLOOD ELEVATION OF 7.5 NGVD.

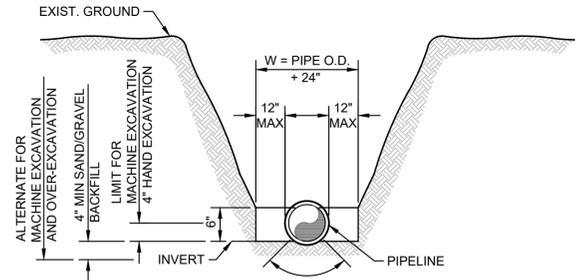
PUMP STATION DETAILS-ALTERNATE BID

PLOT DATE: Jan 26, 2016 - 2:39pm XREFS: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

CADD FILE: K:\w_u_wu_psf4\dwg\PS4RCS01_C5-1.dwg	NO.	DATE	BY	REVISION	SEAL	FLORIDA E.B. NO. 48	FLORIDA L.B. NO. 48	FIELD: ---	DATE: JANUARY 2016
					SHAMPALE M. HOLLAND FLORIDA P.E. NO. 69081	MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248	DRAWN: YM DESIGN: SMH APPR: GGG SCALE: AS SHOWN	WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	P.A. NO. B5018.00
				DATE					
								SHEET: C5-2	

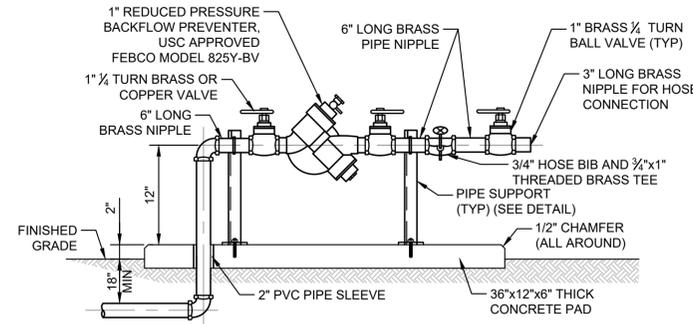
THE FOLLOWING IS A SYNOPSIS OF FDEP RULE 62-555.314 F.A.C. IF THERE ARE ANY NOTED CONFLICTS, THE RULE SHALL BE APPLIED

- STORM SEWER, GRAVITY SANITARY SEWER, AND RECLAIMED WATERMAIN CROSSING UNDER RAW OR POTABLE WATERMAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF SIX (6) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE ALTHOUGH A MINIMUM OF TWELVE (12) INCHES IS PREFERRED. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE STORM/GRAVITY SANITARY SEWER/RECLAIMED WATER PIPE JOINTS AND RAW OR POTABLE WATERMAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN SIX (6) FEET BETWEEN ANY TWO JOINTS. BOTH PIPES SHALL BE D.I.P. (EXCEPT STORM) WHERE THERE IS NO ALTERNATIVE TO STORM/GRAVITY SANITARY SEWER/RECLAIMED WATER PIPES CROSSING OVER A POTABLE WATERMAIN, A MINIMUM TWELVE (12) INCH VERTICAL SEPARATION BETWEEN LINES AND JOINT ARRANGEMENT, AS STATED ABOVE, SHALL BE REQUIRED.
- MAINTAIN A MINIMUM SIX (6) FEET HORIZONTAL SEPARATION BETWEEN POTABLE WATERMAIN AND GRAVITY SANITARY SEWER OR FORCEMAIN EXCEPT THAT THE HORIZONTAL DISTANCE BETWEEN A RAW OR POTABLE WATERMAIN AND A GRAVITY SANITARY SEWER MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE RAW OR POTABLE WATERMAIN IS A MINIMUM OF SIX (6) INCHES ABOVE THE TOP OF GRAVITY SANITARY SEWER. MAINTAIN A MINIMUM THREE (3) FEET HORIZONTAL DISTANCE BETWEEN RAW OR POTABLE WATERMAIN AND RECLAIMED WATERMAIN, STORM SEWER OR STORM FORCEMAIN.
- FORCEMAIN CROSSING RAW OR POTABLE WATERMAIN OR RECLAIMED WATERMAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWELVE (12) INCHES BETWEEN THE OUTSIDE OF THE FORCEMAIN AND OUTSIDE OF THE RAW OR POTABLE WATERMAIN OR RECLAIMED WATERMAIN WITH THE WATERMAIN CROSSING OVER THE FORCEMAIN, WHERE POSSIBLE.

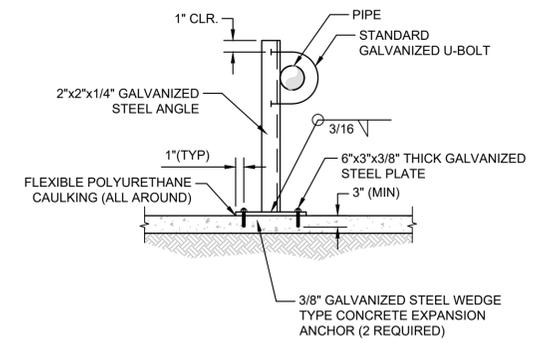


NOTE: FOR PLACEMENT OF BACKFILL MATERIAL SEE SPECIFICATIONS.

2 TRENCHING
C5-3

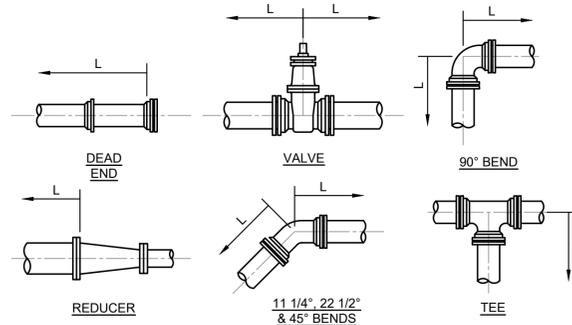


3 BACKFLOW PREVENTER
C5-3



4 PIPE SUPPORT
C5-3

1 STANDARD WATER AND SEWER SEPARATION CRITERIA
C5-3

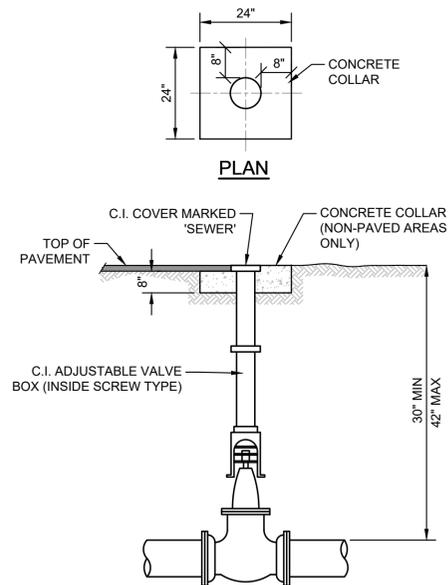


RESTRAINED PIPE JOINTS

NOTES

- LENGTH 'L' IS IN FEET
- RESTRAINED LENGTHS ARE BASED ON THE FOLLOWING:
 - 150 PSI TEST PRESSURE
 - MINIMUM 30" COVER
 - PVC - PIPE SIZES 4" - 12" DI - PIPE SIZES 4" - 48"
 - SANDY SOIL
 - SAFETY FACTOR OF 1.5
- LENGTH 'L' SHOWN IN THE TABLE TO BE RESTRAINED IN THE DIRECTION OF THE ARROWS

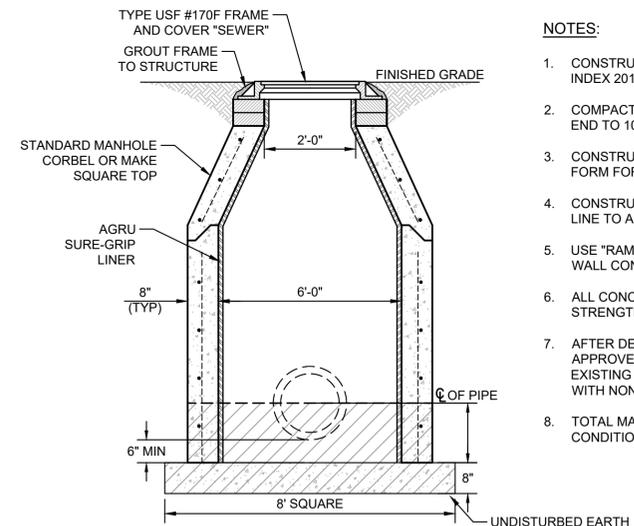
FITTING TYPE	PIPE SIZE																	
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"				
90° HORIZ. BEND	17	14	24	31	26	38	40	42	35	40	44	49	53	61	71	80	89	96
45° HORIZ. BEND	7	6	10	8	13	11	15	12	18	16	18	20	22	25	29	33	37	40
22.5° HORIZ. BEND	3	3	5	4	6	5	7	6	8	7	8	9	10	10	12	14	16	18
11.25° HORIZ. BEND	2	2	3	2	3	3	4	3	4	4	4	5	5	6	7	8	9	10
45° VERT. OFFSET	19	12	27	17	35	22	42	27	50	36	40	44	48	55	67	77	86	95
22.5° VERT. OFFSET	9	6	13	8	17	11	20	13	24	17	19	21	23	27	32	37	41	46
11.25° VERT. OFFSET	5	3	6	4	8	5	10	6	12	9	10	11	12	13	16	18	21	23
DEAD END AND INLINE VALVE	48	30	69	42	85	54	102	66	120	86	97	107	117	136	162	186	208	229
TEE (BRANCH RESTRAINT)	4"x	21	18	31	24	37	30	44	37	50	44	57	50	63	57	70	64	77
	6"x	-	-	39	30	42	34	47	40	53	47	60	54	67	61	74	68	81
	8"x	-	-	-	59	47	55	44	52	44	52	44	52	44	52	44	52	44
	10"x	-	-	-	-	75	61	69	57	65	57	65	57	65	57	65	57	65
	12"x	-	-	-	-	-	89	75	83	71	79	71	79	71	79	71	79	71
	14"x	-	-	-	-	-	-	99	85	93	81	89	81	89	81	89	81	89
	16"x	-	-	-	-	-	-	-	109	95	103	91	99	91	99	91	99	91
	18"x	-	-	-	-	-	-	-	-	119	105	113	101	109	101	109	101	109
	20"x	-	-	-	-	-	-	-	-	-	119	105	113	101	109	101	109	101
	24"x	-	-	-	-	-	-	-	-	-	-	119	105	113	101	109	101	109
REDUCER (LARGER PIPE RESTRAINT)	4"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18"x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



NOTES

- TOP OF LID MUST BE FLUSH WITH PAVEMENT OR CONCRETE COLLAR.
- WHEN VALVE IS DEEPER THAN 36" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT TO 24" OF FINISHED GRADE. EXTENSION MUST BE SET SCREW TYPE AND ATTACHED TO OPERATING NUT.

6 VALVE SETTING
C5-3



NOTES

- CONSTRUCTION SHALL BE IN ACCORDANCE WITH FOOT INDEX 201.
- COMPACT BOTTOM OF TRENCH 3' AROUND STRUCTURE END TO 100% OF THE MAX-DENSITY AS PER AASHTO-T-99.
- CONSTRUCT CONCRETE SLAB UNDER EXISTING PIPE AND FORM FOR AN 8" PRECAST VERTICAL WALL SECTION.
- CONSTRUCT A FORMED INVERT FROM THE NEW SEWER LINE TO ALLOW FLOW FROM THE EXISTING PIPE.
- USE "RAM NECK" OR OTHER APPROVED JOINT SEALANT AT WALL CONNECTION TO BASE SLAB IF PRECAST IS USED.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI TYPE 2.
- AFTER DEMOLITION OF EXISTING STRUCTURE IS APPROVED BY OWNER, CUT AND REMOVE THE TOP OF THE EXISTING SEWER PIPE AND SEAL CRACKS AND OPENINGS WITH NONSHRINK GROUT.
- TOTAL MANHOLE HEIGHT SHALL MATCH THE FIELD CONDITIONS AS SHOWN ON DRAWINGS.

7 DOG HOUSE MANHOLE
C5-3

5 RESTRAINED PIPE JOINTS
C5-3

PLOT DATE: Jan 12, 2016 - 10:43am XREFS: IMAGES: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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NO.	DATE	BY	REVISION

SEAL	FLORIDA E.B. NO. 48
SHAMPALE M. HOLLAND FLORIDA P.E. NO. 69081	FLORIDA L.B. NO. 48
DATE	

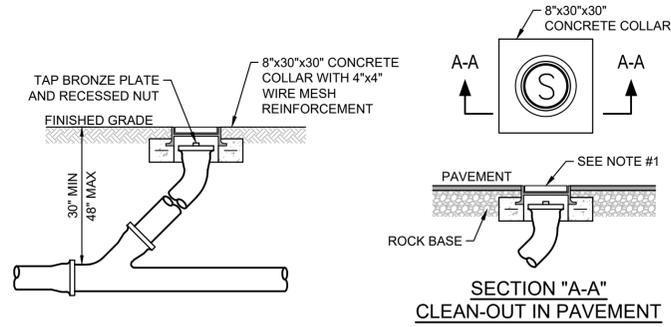
MOCK • ROOS
ENGINEERS • SURVEYORS • PLANNERS
5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

FIELD: ---
DRAWN: YM
DESIGN: SMH
APPR: GGG
SCALE: NTS

DATE: JANUARY 2016
P.A. NO. B5018.00
DWG. NO. 44-43-15-157
SHEET: C5-3

DETAILS

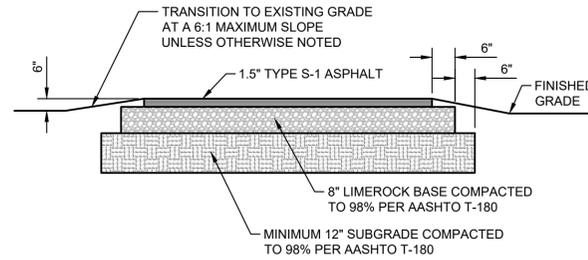
WASTEWATER PUMP STATION NO. 4
AND GENERATOR REPLACEMENT
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA



NOTES:

1. U.S. FOUNDRY NO. 7621 REVERSIBLE HANDHOLE RING AND COVER OR APPROVED EQUAL SHALL BE USED, COVER TO BE CAST WITH "S" IN THE CENTER.
2. CLEAN OUT REQUIRED ON ALL SERVICES AT PROPERTY LINE.
3. STANDARD WYE SHALL BE USED AT CLEAN OUT.
4. ALL PIPE AND CLEANOUT SHALL BE 6" MIN.

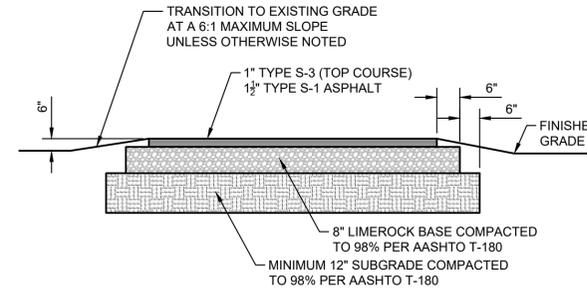
1 CLEANOUT
C5-4



NOTE:

1. EXTEND BASE 6" BEYOND EDGE OF PAVEMENT AND COMPACTED SUBGRADE 6" BEYOND BASE (TYPICAL).

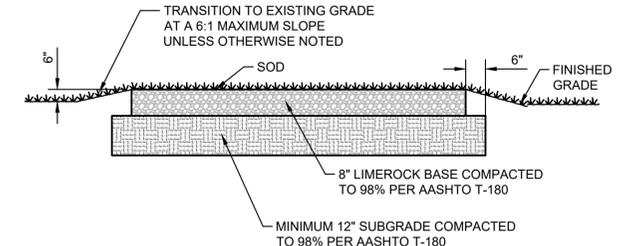
2 GOLF CART PATH REPLACEMENT
C5-4



NOTE:

1. EXTEND BASE 6" BEYOND EDGE OF PAVEMENT AND COMPACTED SUBGRADE 6" BEYOND BASE (TYPICAL), EXTEND COMPACTED SUBGRADE 6" BEYOND BACK OF CURB WHEN TYPE 'D' CURB IS USED.

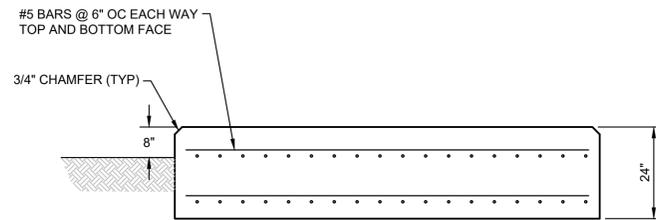
3 ASPHALT DRIVEWAY
C5-4



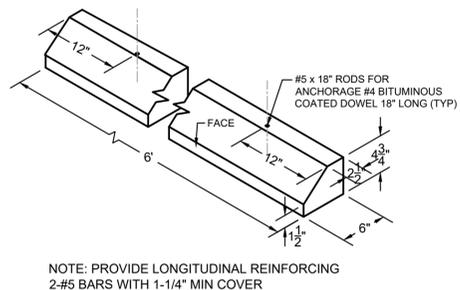
NOTE:

1. EXTEND COMPACTED SUBGRADE 6" BEYOND BASE (TYPICAL).

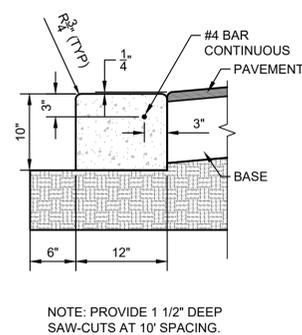
4 STABILIZED GRASS SECTION
C5-4



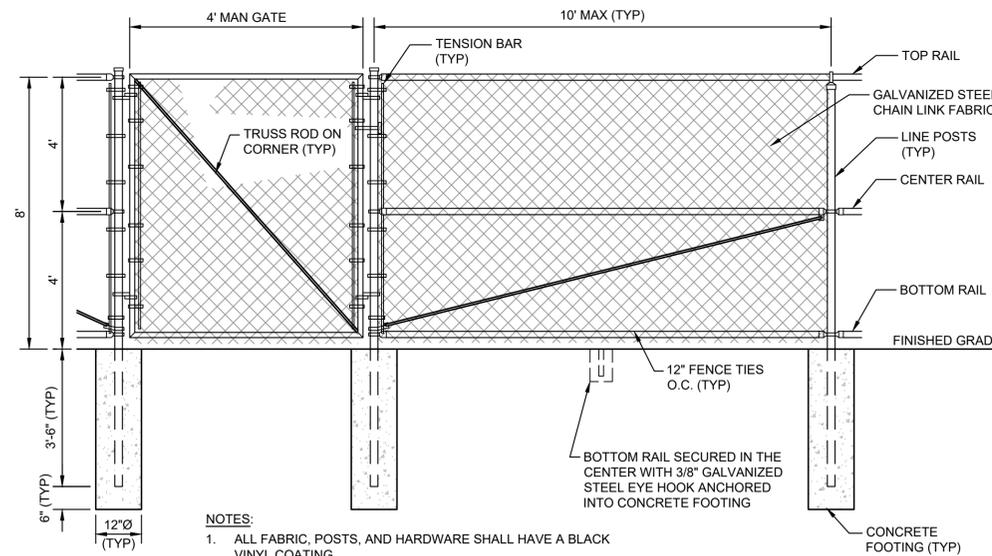
5 GENERATOR PAD SECTION
C5-4



6 CONCRETE WHEEL STOP
N.T.S.
C5-4



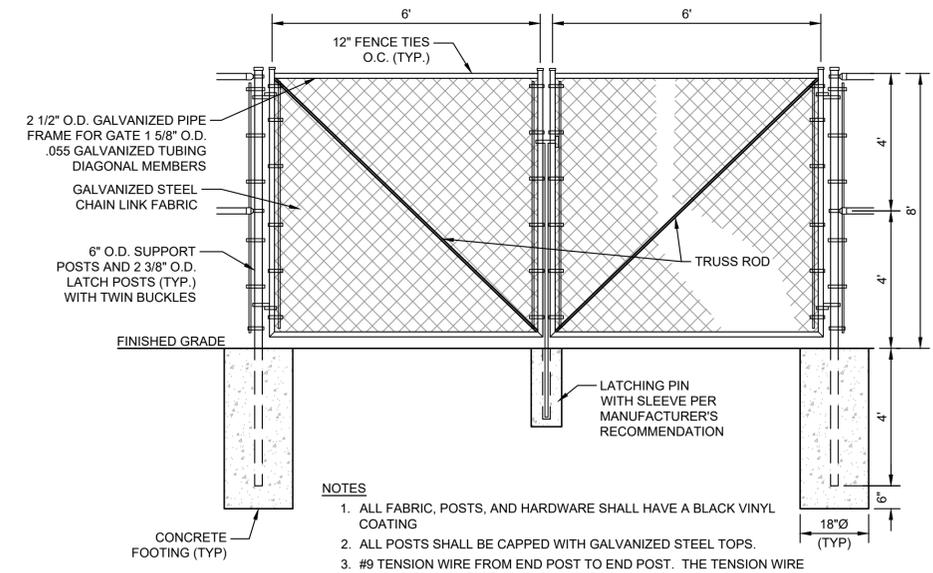
7 HEADER CURB
C5-4



NOTES:

1. ALL FABRIC, POSTS, AND HARDWARE SHALL HAVE A BLACK VINYL COATING.
2. ALL POSTS SHALL BE CAPPED WITH GALVANIZED STEEL TOPS.
3. #9 TENSION WIRE FROM END POST TO END POST. THE TENSION WIRE SHALL TERMINATE AT EACH END POST.
4. HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.

8 FENCE AND MAN GATE
C5-4



NOTES:

1. ALL FABRIC, POSTS, AND HARDWARE SHALL HAVE A BLACK VINYL COATING.
2. ALL POSTS SHALL BE CAPPED WITH GALVANIZED STEEL TOPS.
3. #9 TENSION WIRE FROM END POST TO END POST. THE TENSION WIRE SHALL TERMINATE AT EACH END POST.
4. HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE 3/8" GALVANIZED CHAIN TO LOCK GATES WITH PAD LOCKS PROVIDED BY CITY.

9 DOUBLE HUNG GATE
C5-4

PLOT DATE: Feb 01, 2016 - 4:43pm. XREFS: IMAGES:

BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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NO.	DATE	BY	REVISION

SEAL	FLORIDA E.B. NO. 48
SHAMPALE M. HOLLAND FLORIDA P.E. NO. 69081	FLORIDA L.B. NO. 48
DATE	

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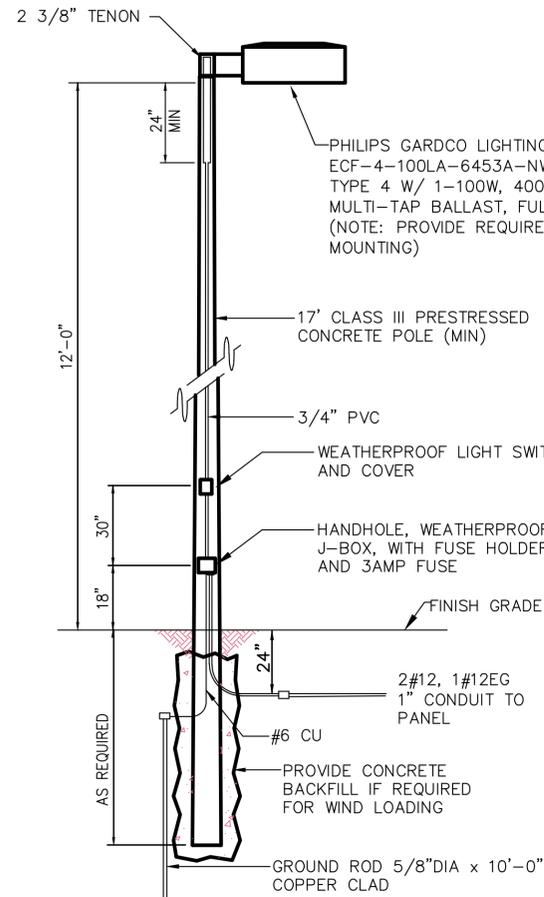
5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

FIELD: ----
DRAWN: YM
DESIGN: SMH
APPR: GGG
SCALE: NTS

WASTEWATER PUMP STATION NO. 4
AND GENERATOR REPLACEMENT
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA

DATE: JANUARY 2016
P.A. NO. B5018.00
DWG. NO. 44-43-15-157
SHEET: C5-4

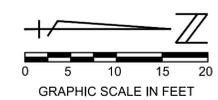
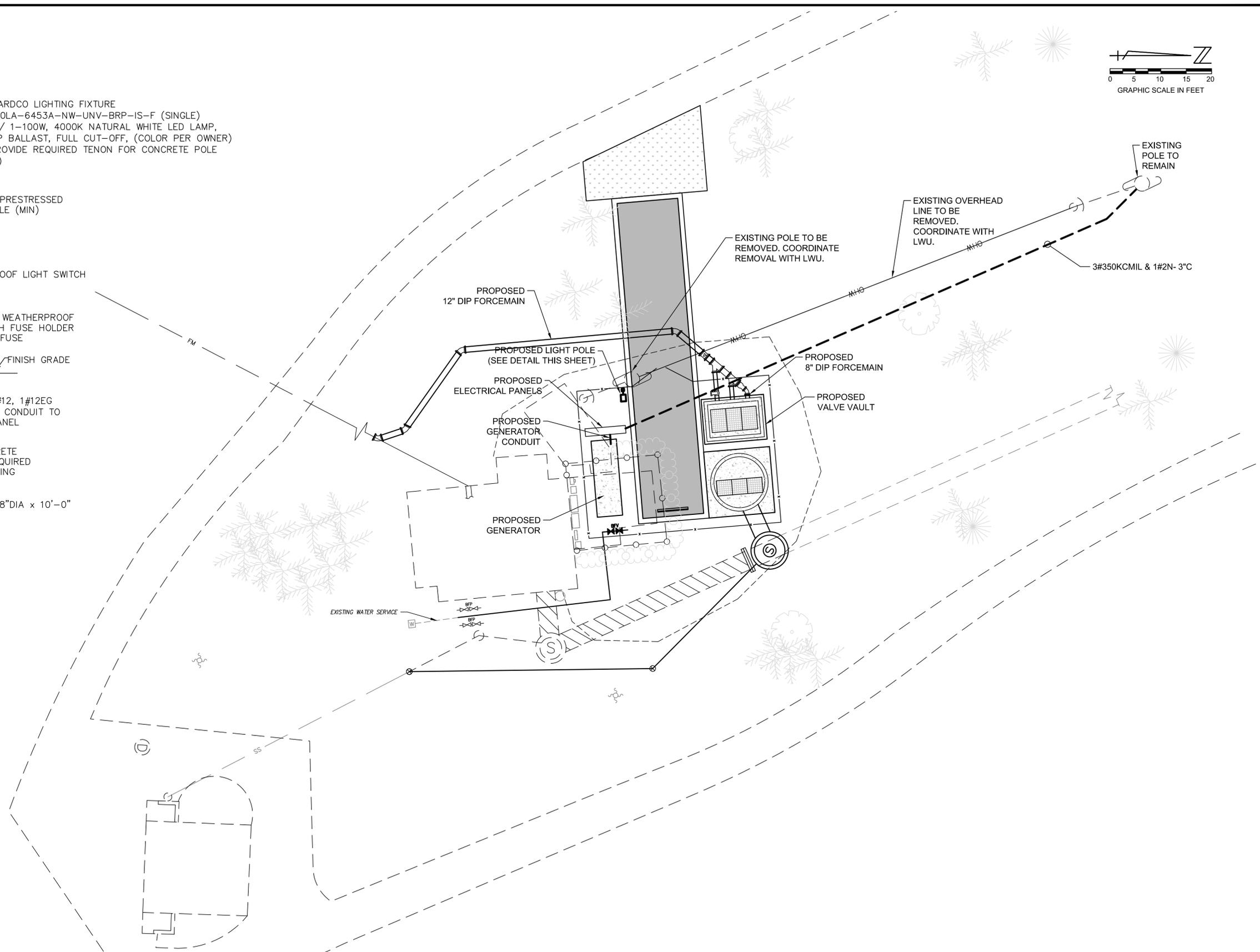
DETAILS



LIGHT POLE DETAIL
N.T.S.

WINDLOAD NOTE:

ALL POLE INSTALLATIONS SHALL BE SUITABLE FOR WIND LOAD IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. THE CONTRACTOR SHALL INCLUDE WITH THE SHOP DRAWING SUBMITTAL, A POLE WIND LOADING CALCULATION SEALED BY A STRUCTURAL ENGINEER REGISTERED IN FLORIDA SHOWING THAT THE PROPOSED INSTALLATION WILL MEET THE WIND LOADING REQUIREMENT.



PLOT DATE: Feb 02, 2016 - 3:26pm XREFS: 0715-000 SURV.dwg p4rcad1.mxd1.dwg IMAGES: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

NO.	DATE	BY	REVISION

SEC Smith Engineering Consultants, Inc.
State Auth. #5229
2161 Palm Beach Lakes Blvd., Suite 312
West Palm Beach, FL 33409
(561) 616-3011 fax (561) 616-3912
www.smithengineeringconsultants.com

SEAL
LARRY M. SMITH
FLORIDA P.E. NO. 45997
DATE

FLORIDA E.B. NO. 48
MOCK • ROOS
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5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

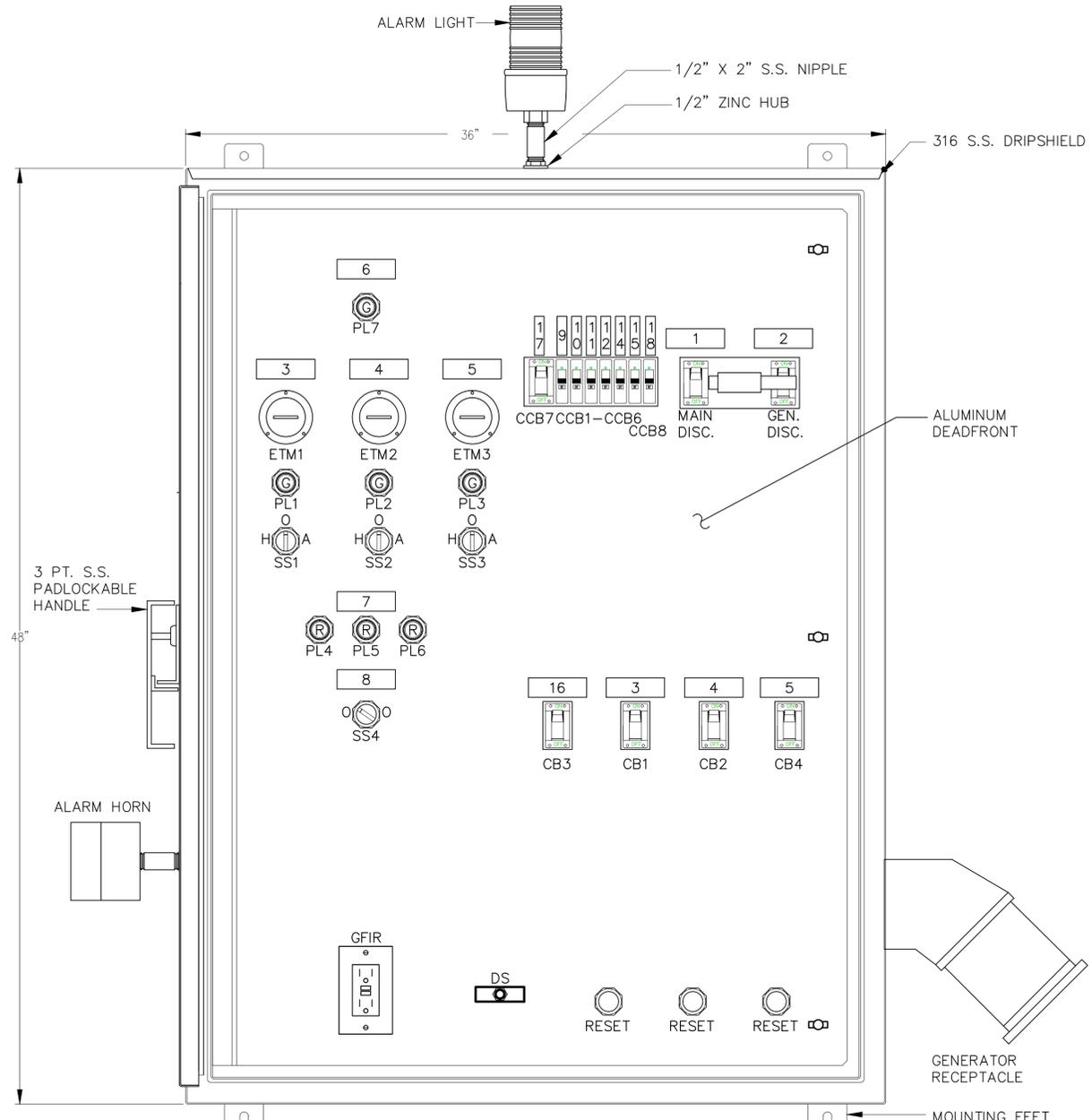
FLORIDA L.B. NO. 48

FIELD: D. LEAVY
DRAWN: S.P.H.
DESIGN: S.P.H.
APPR: L.M.S.
SCALE: AS SHOWN

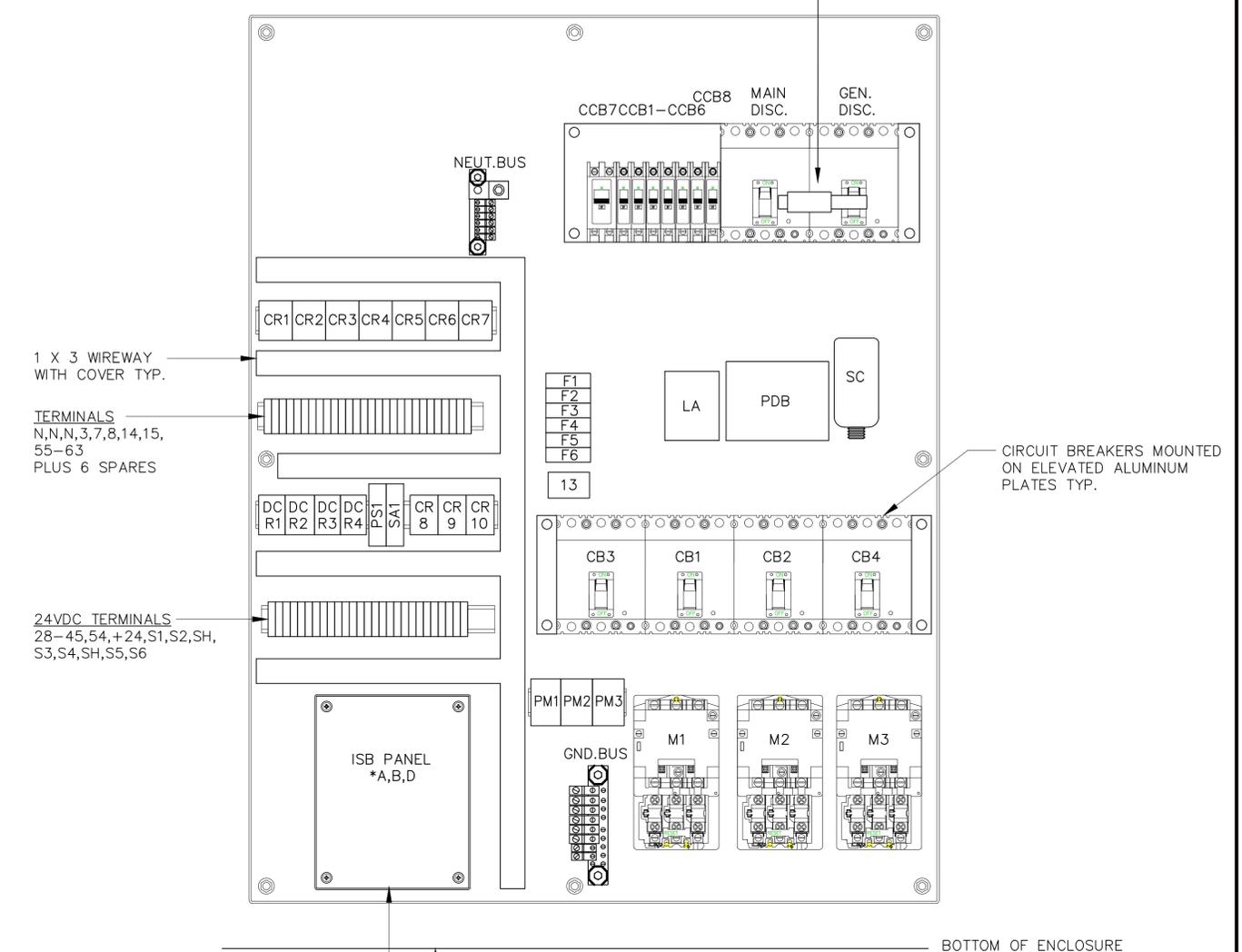
ELECTRICAL SITE PLAN

WASTEWATER PUMP STATION NO. 4
AND GENERATOR REPLACEMENT
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA

DATE: JANUARY 2016
P.A. NO. B5018.00
DWG. NO. 44-43-15-157
SHEET: E1-1



FRONT VIEW
(DOOR SHOWN OPEN)



SUBPANEL LAYOUT

NAME PLATE SCHEDULE

NP	1 X 3	LIFT STATION NO.10 CONTROL PANEL	PL1,PL2,PL3	RING	RUN
1	1 X 3	MAIN DISCONNECT (RED)	PL4	RING	LOW
2	1 X 3	GENERATOR DISCONNECT	PL5	RING	HIGH
3	1 X 3	PUMP NO.1	PL6	RING	HIGH, HIGH LEVEL
4	1 X 3	PUMP NO.2	PL7	RING	ON
5	1 X 3	PUMP NO.3	SS1,SS2,SS3	RING	HAND - OFF - AUTO
6	1 X 3	CONTROL POWER	SS4	RING	OFF - ON
7	1 X 3	WETWELL LEVEL			
8	1 X 3	ALARM HORN			
9	1/2 X 2	GFIR			
10	1/2 X 2	RTU 120V			
11	1/2 X 2	CONTROL POWER			
12	1/2 X 2	ISB/GAS DETECT.			
14	1/2 X 2	BATTERY CHARGER			
15	1/2 X 2	GENERATOR SPACE HEATR			
13	LABEL	CAUTION: TO REDUCE THE RISK OF FIRE, REPLACE ONLY WITH THE SAME TYPE AND RATING OF FUSE.			
16	1 X 3	MISC. 120V POWER			
17	1/2 X 2	GENERATOR JACKET WATER HEATER			
18	1/2 X 2	SITE LIGHT POLE			

- NOTES:
- SHORT CIRCUIT CURRENT: 22,000A RMS SYMMETRICAL, 240V MAXIMUM.
 - PANEL SHALL BE BUILT TO U.L. 698A SPECIFICATIONS AND SHALL BEAR THE U.L. 698A LABEL.

- *INTRINSIC SAFETY MARKINGS
- INTRINSICALLY SAFE FIELD WIRING TERMINALS.
 - WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.
 - INTRINSICALLY SAFE CIRCUITS.
 - PROVIDES INTRINSICALLY SAFE CIRCUIT EXTENSIONS FOR USE IN CLASS 1, DIVISION 1, GROUPS A, B, C & D, HAZARDOUS LOCATIONS WHEN CONNECTED PER INSTALLATION INSTRUCTION ISB-2A.

CONTROL PANEL DETAILS

PLOT DATE: Feb 02, 2016 - 3:27pm XREFS: IMAGES: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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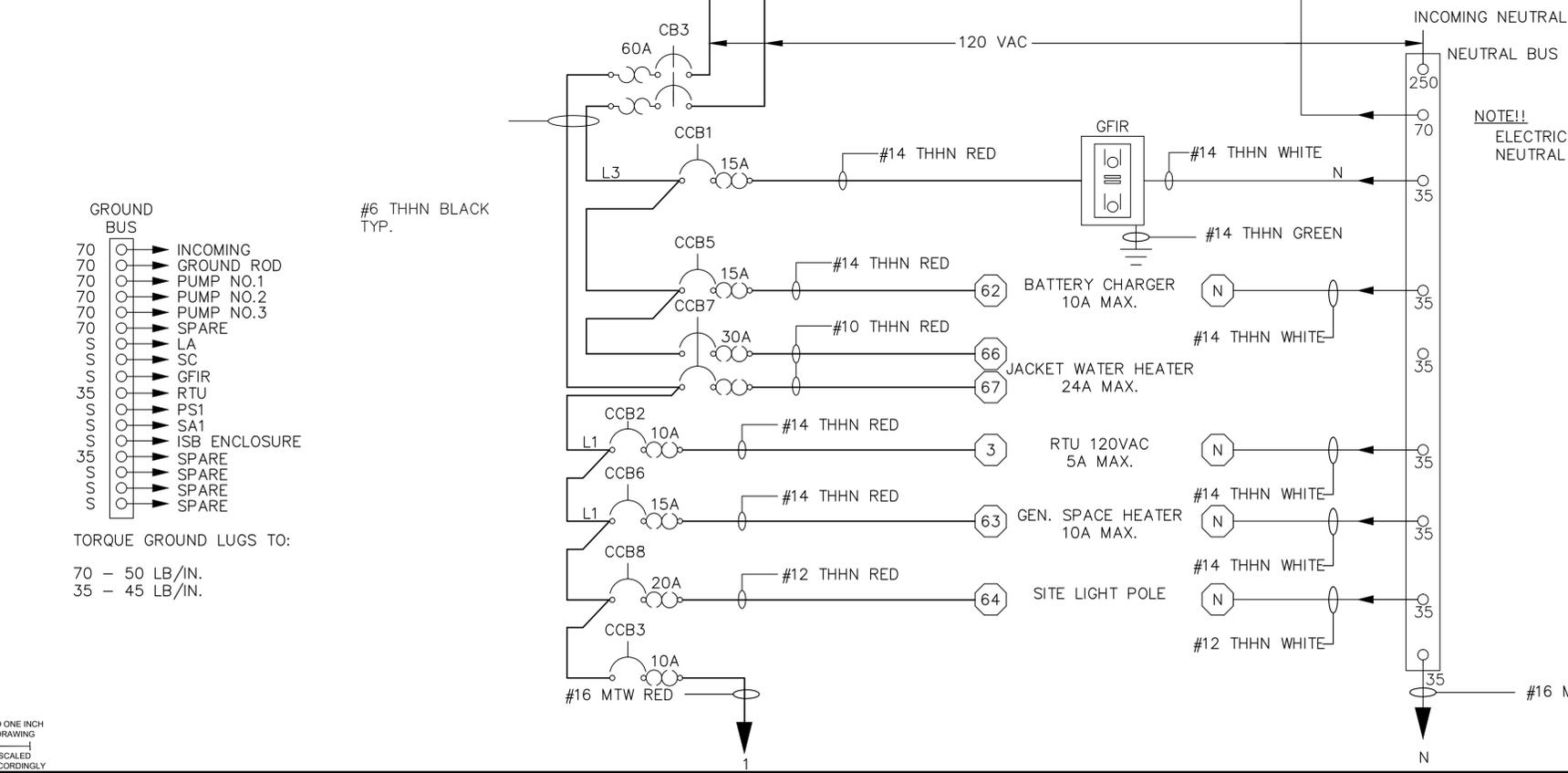
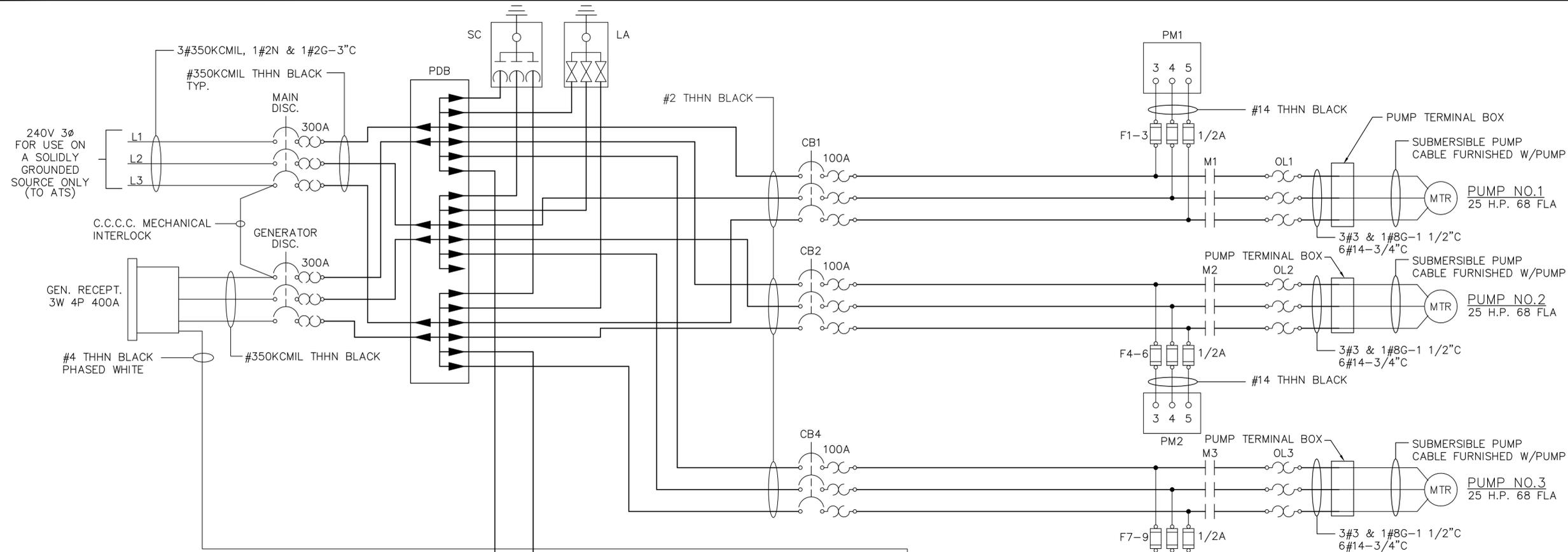
SEC Smith Engineering Consultants, Inc.
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www.smithengineeringconsultants.com

SEAL
LARRY M. SMITH
FLORIDA P.E. NO. PE #45997
DATE

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FLORIDA L.B. NO. 48
FIELD: -
DRAWN: SPH
DESIGN: SPH
APPR: LMS
SCALE: AS SHOWN

DATE: JANUARY 2016
P.A. NO. B5018.00
DWG. NO. 44-43-15-157
SHEET: E3-1
WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA



NOTE!!
ELECTRICAL CONTRACTOR TO GROUND NEUTRAL PER NEC & LOCAL CODES

- NOTES:**
- ALL CONTROL WIRING WITHIN CONTROL CABINET TO BE #16 MTW CU. UNLESS OTHERWISE NOTED
 - DESIGNATES TERMINALS FOR CUSTOMER CONNECTION
 - WIRE ENDS WITHIN CABINET TO BE IDENTIFIED WITH HEAT SHRINK WIRE MARKERS.
 - ALL WIRES EXTERNAL TO CONTROL CABINET TO BE TERMINATED TO A TERMINAL
 - TORQUE CONTROL TERMINALS TO 20 LB. IN.
 - PANEL SHALL BE BUILT TO U.L. 698A SPECIFICATIONS AND SHALL BEAR THE U.L. 698A LABEL.
 - PROVIDE GROUND WIRES, SIZED PER CODE, TO ALL REMOTE EQUIPMENT.

CONTROL SYSTEM WIRING DIAGRAM

PLOT DATE: Feb 02, 2016 - 3:28pm XREFS: IMAGES: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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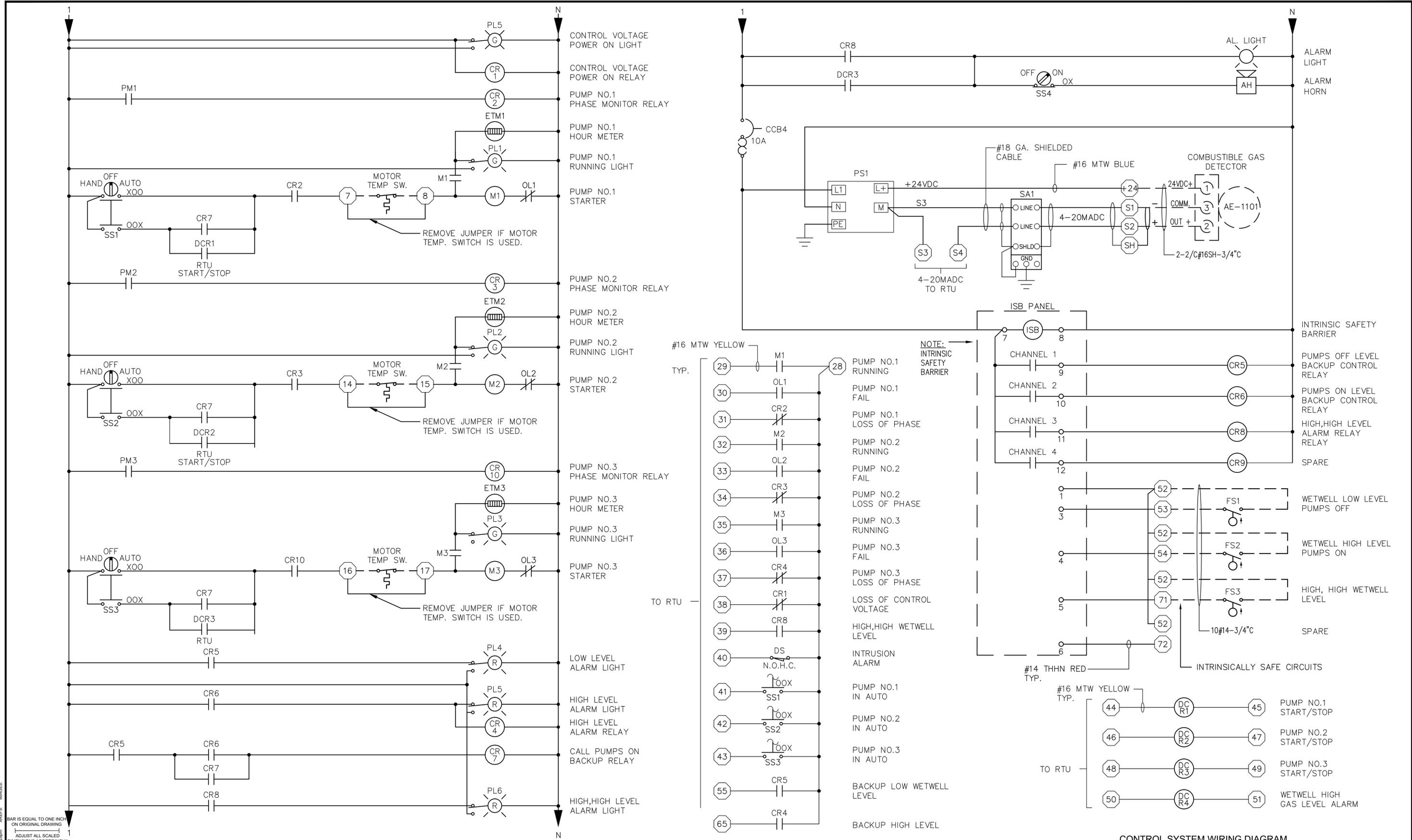
SEAL
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SHEET: E4-1

WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA



PLOT DATE: Feb 02, 2016 - 3:28pm XREFS: IMAGES: BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

NO.	DATE	BY	REVISION

SEC Smith Engineering Consultants, Inc.
 State Auth. #5229
 2161 Palm Beach Lakes Blvd., Suite 312
 West Palm Beach, FL 33409
 (561) 616-3011 fax (561) 616-3912
 www.smithengineeringconsultants.com

SEAL	FLORIDA E.B. NO. 48
LARRY M. SMITH FLORIDA P.E. NO. PE #45997	
DATE	

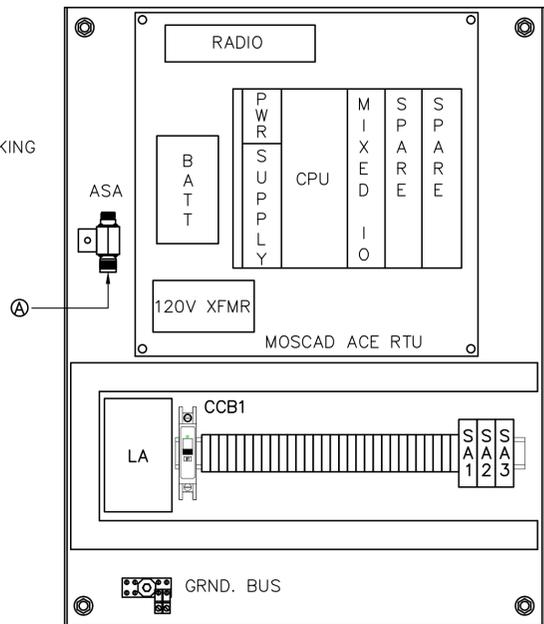
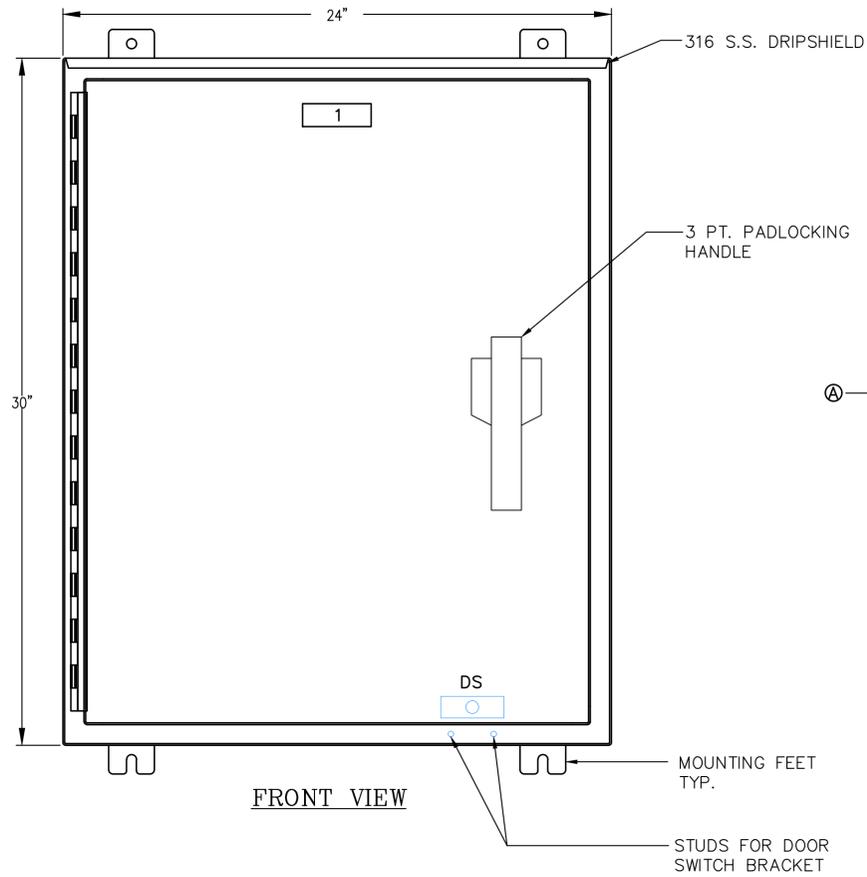
MOCK • ROOS
 ENGINEERS • SURVEYORS • PLANNERS
 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248

FIELD: -
DRAWN: SPH
DESIGN: SPH
APPR: LMS
SCALE: AS SHOWN

WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT
 CITY OF LAKE WORTH
 PALM BEACH COUNTY, FLORIDA

DATE: JANUARY 2016
P.A. NO. B5018.00
DWG. NO. 44-43-15-157
SHEET: E5-1

NAMEPLATE SCHEDULE		
1	1 X 3	RTU CONTROL PANEL



TERMINALS
N,N1,2,24+,24+,24-,
3-21
plus 5 spares

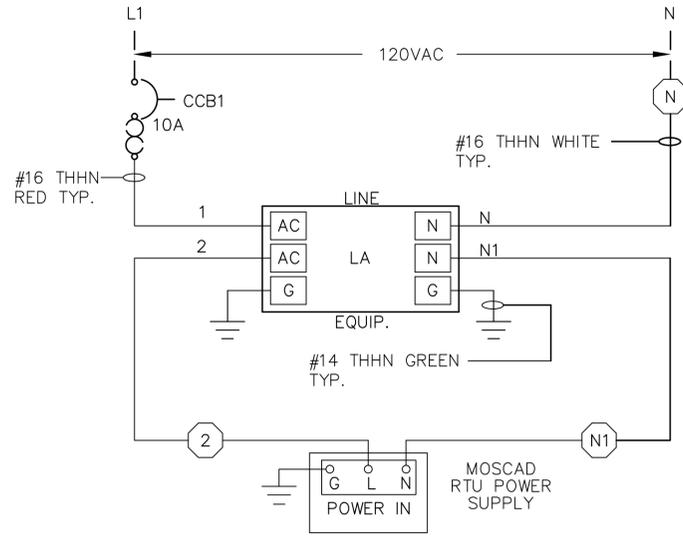
NOTE.
PANEL SHALL BE BUILT TO U.L. 508A SPECIFICATIONS
AND SHALL BEAR THE U.L. 508A LABEL.

RTU BILL OF MATERIAL		
ITEM	QTY	DESCRIPTION
GRND.BUS	3	PANDUIT CB35 COPPER LUGS
	1	GLASTIC 2165-1B INSULATOR
	4	SQD CLASS 9080 MHA10 END CLAMPS
	2	SQD CLASS 9080 GM6B END BARRIER
TERMINALS	30	SQD CLASS 9080 GR6 600V BOX LUG TERMINALS
	1	MOTOROLA F7547 MOSCAD ACE WITH THE FOLLOWING:
	1	MOTOROLA CM200 RADIO 458.6125 MHZ
	1	MOTOROLA OPTION V446, ACE CPU3640
	1	MOTOROLA OPTION V261, AC POWER SUPPLY W/ BATTERY CHARGER
	1	MOTOROLA OPTION V114, 6.5AH BACKUP BATTERY
	1	MOTOROLA OPTION V103, 3 I/O SLOT FRAME
	1	MOTOROLA OPTION V214, 15" X 15" METAL BACK PLATE
	1	MOTOROLA OPTION V245, 4AI, 16DI, 4 DO MIXED I/O MODULE
	1	RF INDUSTRIES RFN-1024-1SI TYPE N FEMALE CLAMP JACK CONNECTOR
	1	POLYPHASER IS-50NX-C1-ME COAXIAL SURGE PROTECTOR
ASA	3	EDCO DRS036 SIGNAL SURGE ARRESTER
SA1-SA3	1	SQD CLASS 9007 AP221 DOOR SWITCH
DS	1	EDCO HSP-121A 120VAC LINE SURGE ARRESTER
LA	1	SQD CLASS QOU110 1P 10A CIRCUIT BREAKER
CCB1	1	NEMA 12, MODIFIED TO 3R 316 S.S. ENCLOSURE W/ FOLL:
ENCLOSURE	1	A) 30"H X 24"W X 8"D
		B) SUBPANEL: ALUMINUM
		C) 316 S.S. DRIPSHIELD
		D) 3 PT. S.S. PADLOCKABLE HANDLE
		E) WHITE PAINT

PLOT DATE: Feb 02, 2016 - 3:29pm
 IMAGES:
 XREFS:
 BAR IS EQUAL TO ONE INCH
 ON ORIGINAL DRAWING
 ADJUST ALL SCALED
 DIMENSIONS ACCORDINGLY
 CADD FILE:
 M:\SEC 2015\15027 MRA-LWU PS
 S15027E6-1.dwg

RTU PANEL DETAILS

 2161 Palm Beach Lakes Blvd., Suite 312 West Palm Beach, FL 33409 (561) 616-3011 fax (561) 616-3912 www.smithengineeringconsultants.com	SEAL LARRY M. SMITH FLORIDA P.E. NO. PE #45997	FLORIDA E.B. NO. 48 ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248	FLORIDA L.B. NO. 48 FIELD: - DRAWN: SPH DESIGN: SPH APPR: LMS SCALE: AS SHOWN	DATE: JANUARY 2016 P.A. NO. B5018.00 DWG. NO. 44-43-15-157 SHEET: E6-1
	NO. DATE BY REVISION	WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA		

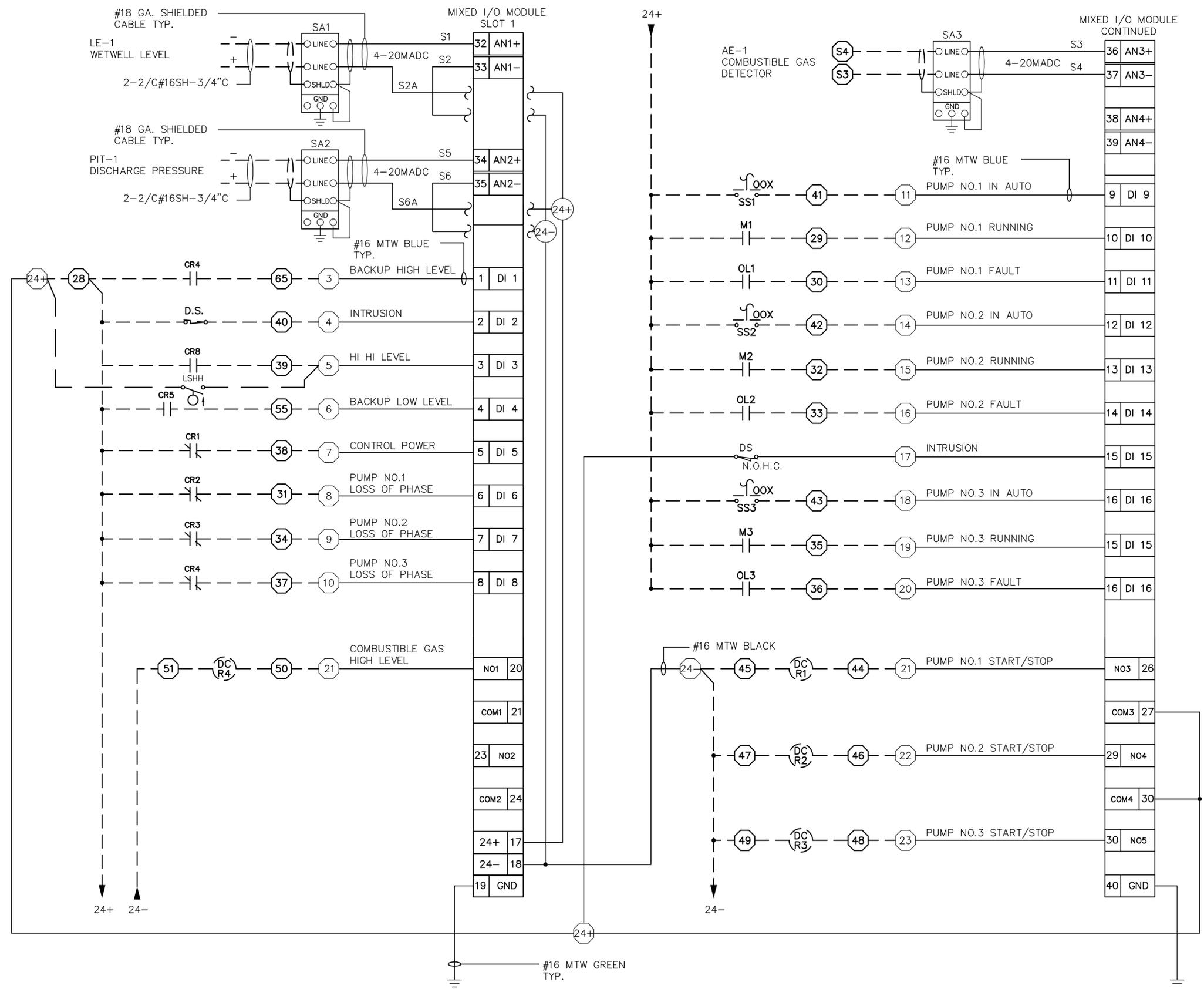


- GROUND BUS
- 35 INCOMING
 - 35 SUBPANEL
 - RTU PS
 - LA
 - LA
 - SLOT 1-5
 - SLOT 1-20
 - SLOT 2-5
 - SLOT 2-20
 - SA1
 - SPARE
 - SA2
 - SPARE
 - SPARE
 - SPARE

TORQUE GROUND TERMINALS TO:
35 - 40 LB/IN.

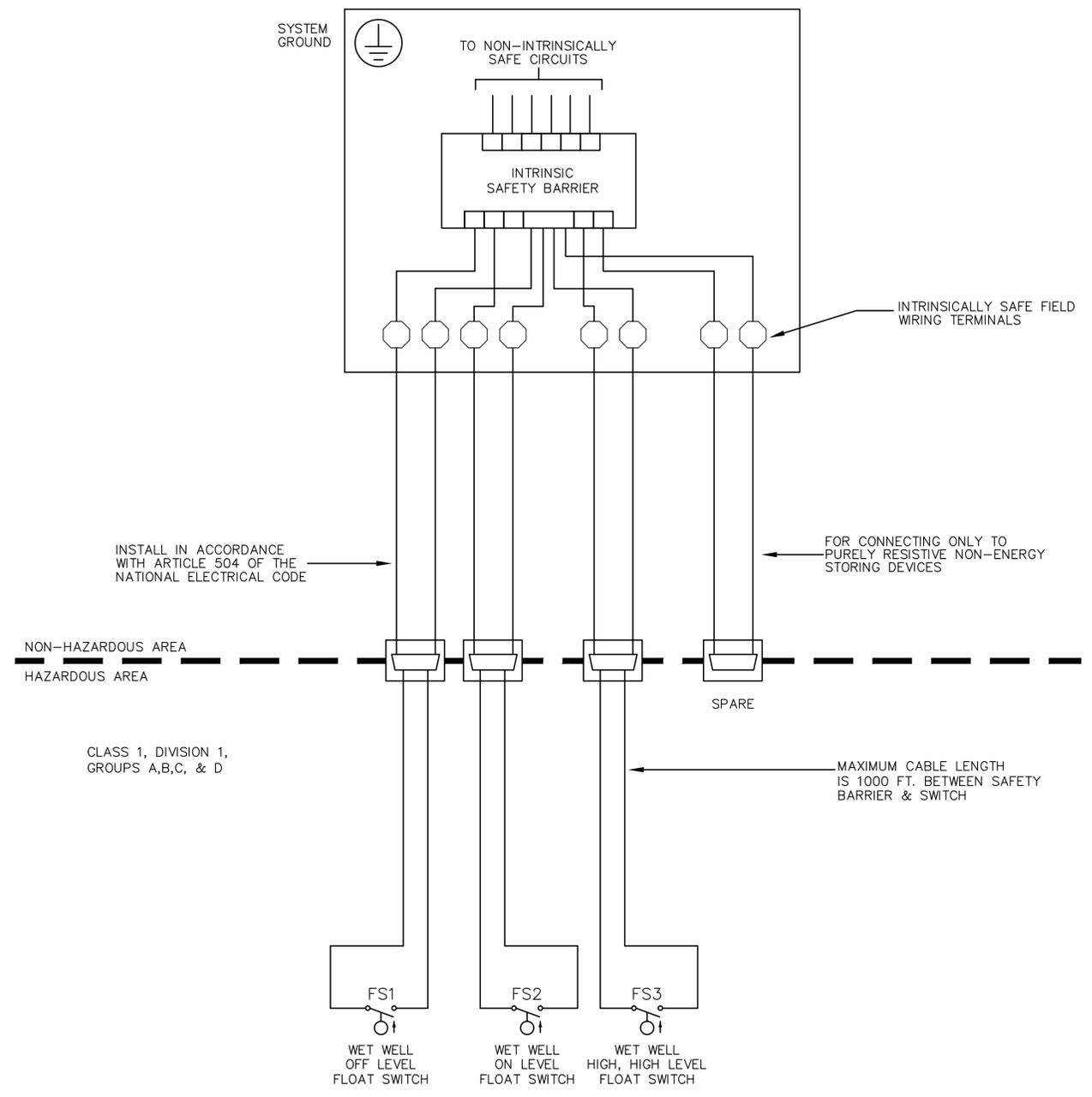
NOTE:
ALL CONTROL WIRING WITHIN CONTROL CABINET TO BE #16 MTW CU. UNLESS OTHERWISE NOTED
○ DESIGNATES TERMINALS FOR CUSTOMER CONNECTION
WIRE ENDS WITHIN CABINET TO BE IDENTIFIED WITH HEAT SHRINK WIRE MARKERS.
ALL WIRES EXTERNAL TO CONTROL CABINET TO BE TERMINATED TO A TERMINAL
TIGHTEN CONTROL TERMINALS TO 20 LB/IN.

NOTE:
———— DESIGNATES EQUIPMENT/WIRING LOCATED IN PANEL
- - - - - DESIGNATES EQUIPMENT/WIRING REMOTE TO PANEL.



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<p>CADD FILE: M:\SEC 2015\515027 MRA-LWU PS 1515027E7-1.dwg</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>REVISION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		NO.	DATE	BY	REVISION							
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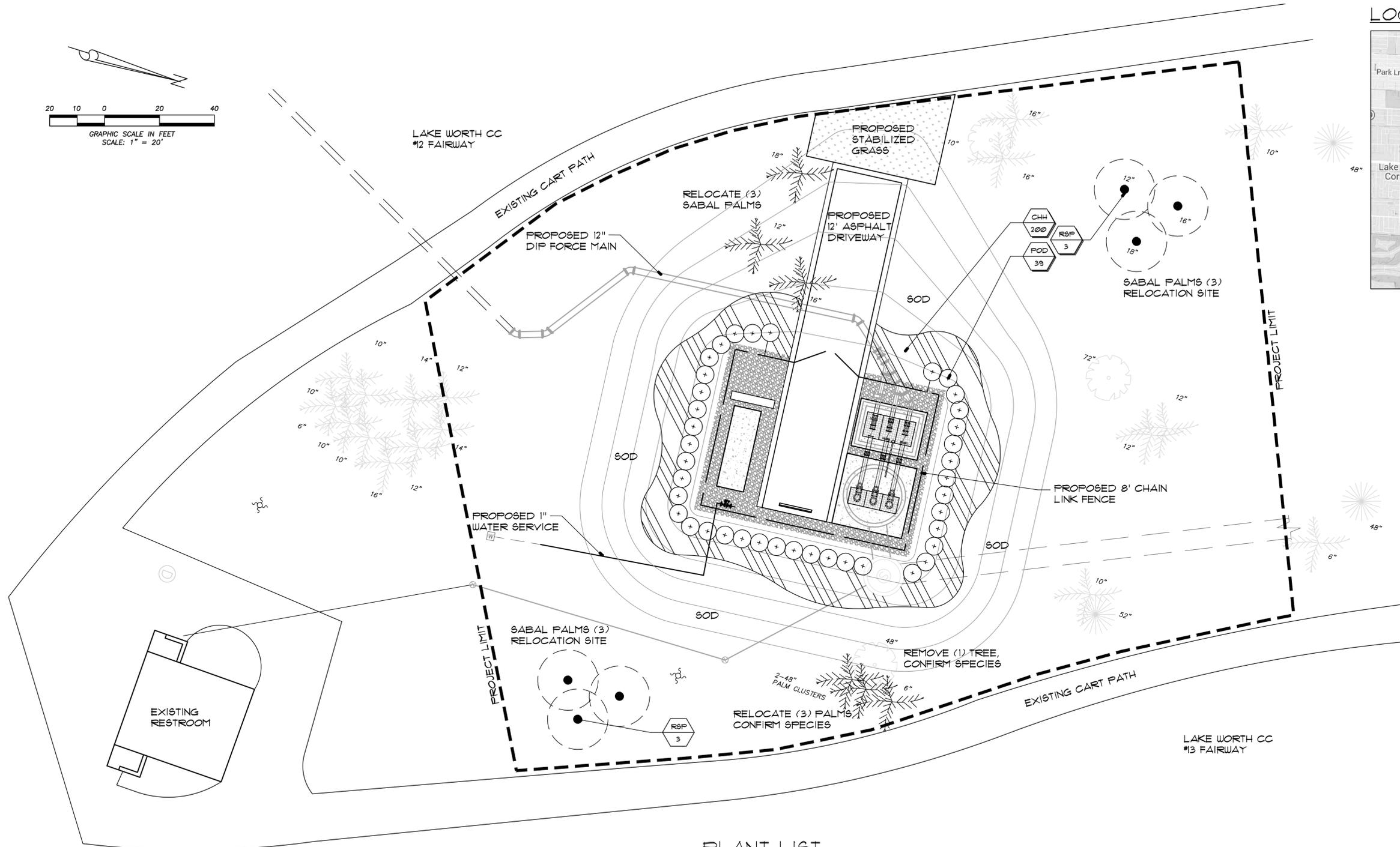
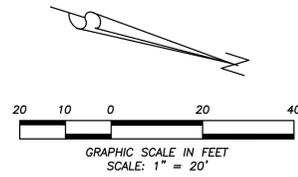


ISB PANEL WIRING DIAGRAM

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CADD FILE: M:\SEC 2015\1515027 MRA-LWU PS 4 S15027E8-1.dwg	NO. DATE BY REVISION	 Smith Engineering Consultants, Inc. State Auth. #5229 2161 Palm Beach Lakes Blvd., Suite 312 West Palm Beach, FL 33409 (561) 616-3011 fax (561) 616-3912 www.smithengineeringconsultants.com	SEAL LARRY M. SMITH FLORIDA P.E. NO. PE #45997	FLORIDA E.B. NO. 48	 MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248	FLORIDA L.B. NO. 48	FIELD: - DRAWN: SPH DESIGN: SPH APPR: LMS SCALE: AS SHOWN	WASTEWATER PUMP STATION NO. 4 AND GENERATOR REPLACEMENT CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA	DATE: JANUARY 2016 P.A. NO. B5018.00 DWG. NO. 44-43-15-157 SHEET: E8-1
			DATE						

LOCATION MAP



PLANT LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
* V CHH	202	CHRYSOBALANUS ICACO	HORIZONTAL COCOPLUM	12" X 15" MIN.	24" O.C.	FULL & THICK TO BASE
M POD	41	PODOCARPUS	PODOCARPUS	6' H. X 3'	36" O.C.	FULL & THICK TO BASE
* V RSP	6	RELOCATED CABBAGE PALM	RELOCATED SABAL PALM	A.N. ON PLAN	A.S.	RELOCATED ON SITE

EXISTING LANDSCAPE MATERIAL DISTURBED DURING CONSTRUCTION TO BE REPLACED 'IN KIND' OR AS DIRECTED BY THE LANDSCAPE ARCHITECT. SIZE AND VARIETY WITH FINAL LOCATION AS DIRECTED BY THE LANDSCAPE ARCHITECT.

- REPAIR SOD OF ANY DISTURBED AREAS WITH BERMUDA 419 TO MATCH ADJACENT UNDISTURBED AREAS.
- MULCH TO BE APPLIED TO ALL PLANTING BEDS, 3" THICK MIN., SHREDDED EUCALYPTUS MULCH.
- CONTRACTOR SHALL COORDINATE WITH GOLF COURSE PERSONNEL TO INSTALL 100% IRRIGATION COVERAGE ON NEW PLANTS THROUGH THE TIE IN OF THE CURRENT IRRIGATION SYSTEM. ALL HEADS AND OTHER EQUIPMENT PRODUCT LINE AND TYPE TO BE APPROVED BY GOLF COURSE MANAGEMENT.

* INDICATES NATIVE PLANT MATERIAL
 V INDICATES VERY DROUGHT TOLERANT
 M INDICATES MODERATE DROUGHT TOLERANCE

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 ↑ ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

<p>CADD FILE: O:\Lake Worth Wastewater Pump Station\20150901\LP-1.dwg</p>	<p>NO. DATE BY REVISION</p>	<p>LANDSCAPE ARCHITECT OF RECORD: EMILY O'MAHOONEY, ASLA CERTIFICATE OF AUTHORIZATION NO. LC0000177</p> <p>Gentile Glas Holloway O'Mahoney & Associates, Inc. Landscape Architects, Planners, and Environmental Consultants 1907 Commerce Ln., Ste. 101, Jupiter, FL 33458 561-575-9557 www.zgho.com</p>	<p>EMILY M. O'MAHOONEY, ASLA, PLA FLORIDA LA. # 0000684</p>	<p>FLORIDA E.B. NO. 48</p> <p>MOCK • ROOS ENGINEERS • SURVEYORS • PLANNERS 5720 Corporate Way, West Palm Beach, Florida 33407 (561) 683-3113, Fax 478-7248</p>	<p>FLORIDA L.B. NO. 48</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>FIELD:</td></tr> <tr><td>DRAWN: KMS</td></tr> <tr><td>FB/P/G: KMS</td></tr> <tr><td>APPR: EOM</td></tr> <tr><td>SCALE: AS SHOWN</td></tr> </table>	FIELD:	DRAWN: KMS	FB/P/G: KMS	APPR: EOM	SCALE: AS SHOWN	<p>LANDSCAPE PLAN</p> <p>WASTEWATER PUMP STATION NO.4 AND GENERATOR REPLACEMENT CITY OF LAKE WORTH PALM BEACH COUNTY, FLORIDA</p>	<p>DATE: JANUARY 2016 P.A. NO. B5018.00 DWG. NO. 44-43-15-157 SHEET: LP-1</p>
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